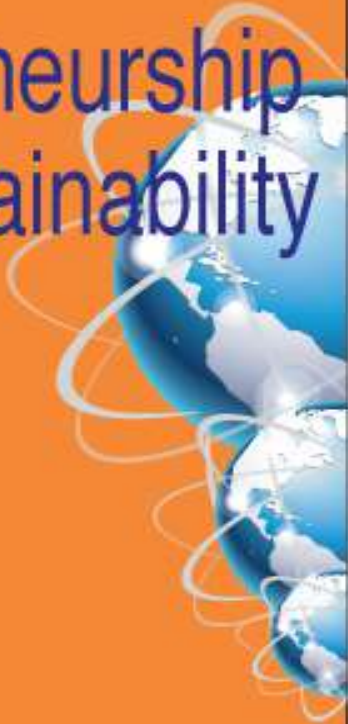


Journal of Asia Entrepreneurship and Sustainability



Refereed Edition

Print: ISSN 1177-4541

On-Line: ISSN 1176-8592

www.asiaentrepreneurshipjournal.com

Editors:

Jens Mueller, New Zealand (Managing)

Rosel Fonacier, Philippines

Dennis Lee Poh Wah, China

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Strategic Sustainability and Management of the Supply Chain: The Art and Science

Harold Schroeder, FCMC, PMP, CHRL, CHE

harold@schroeder-inc.com

Introduction

Corporate decision-makers are increasingly focusing on sustainability not just as a means of reducing the carbon footprint of their organizations, but as an astute business approach proven to be associated with increased profits, reduced costs and market expansion. Business performance is no longer evaluated just in financial terms, but based on the “triple bottom line” comprising economic, environmental and social performance (Carter & Easton, 2011).

For corporate sustainability initiatives to be successful there is a need to secure the involvement and collaboration of all supply chain participants; however, research has revealed evidence of a substantial gap between strategic sustainability goals and practice in many organizations, with the weakest spots often found in the supply chain. Practicing sustainable supply chain management is becoming

increasingly challenging and complex now that many firms are using multiple levels of suppliers or outsourcing many of their business processes.

Drawing on a review of recent literature, we discuss in this article the developments and drivers of change in sustainable supply chain management, the potential business benefits of achieving success in this area, and the documented gaps in sustainable supply chain management practice.

Building on the findings of this review, we argue that effective sustainable supply chain management requires an “art and science” based approach which combines the use of tools, technology and specialist expertise (the “science”) with adequate attention to people-related factors such as cultural realignment, leadership, communications, and stakeholder involvement (the “art”). Achieving the right balance of “art” and “science” is crucial to the success of any organizational change initiative, including sustainable supply chain management, and is key to the ability of an organization to achieve maximum benefits while minimizing the risks of the initiative.

Developments in Sustainable Supply Chain Management

The average company reportedly now spends around 70% of its revenue on external suppliers (Proxima, 2013), which indicates that a high proportion of the

overall risks to firms are external and outside of their direct control. Small outsourcing arrangements using multiple providers are becoming the norm in many sectors (Kuehner-Hebert, 2015), and a firm's supply chain often spans many different countries. With increasing regulatory requirements as well as stakeholder demands for sustainable business performance, firms must ensure that all areas of their supply chain meet expected standards of sustainability, however extensive or complex the supply chain links may be.

Sustainable supply chain management has been defined as “the management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e., economic, environmental and social, into account which are derived from customer and stakeholder requirements” (Seuring and Muller, 2008, p.1700). The growing importance of sustainable supply chain management was reflected in a 2010 Aberdeen Group survey of 360 employers, which found this to be one of the three highest priority areas for improvement in the organization. More than three quarters of the survey respondents reported that they include sustainability criteria in their supply chain management processes (Aberdeen Group, 2010).

More recently, an international survey of 2,061 supply chain professionals from a range of sectors found that 96% of companies were considering sustainability aspects when choosing suppliers and making buying decisions, with almost a third

of these doing so “to a great extent” (cited in American Society of Safety Engineers, 2015).

Despite these positive statistics, the evidence also indicates that there are gaps in the implementation of sustainability initiatives in practice, even among major global corporations (Accenture, 2014; United Nations Environment Programme (UNEP), 2014). A 2014 study recently revealed that only 42% of Canadian companies listed on the TSX Composite are routinely reporting meaningful sustainability data (Bohr, 2015). The weaknesses are often in the supply chain: for example a review of the sustainable development reports of 100 Canadian corporations reported that only half have implemented specific sustainability standards for their suppliers and only a third are actually monitoring suppliers against such standards (Morali & Searcy, 2011). In a 2012 survey of companies participating in the Global Compact, representing 113 countries, it was found that although the majority of respondents had established sustainability “expectations” for suppliers, only 18% were assisting them to set and review goals, and just 9% were actively verifying remediation (UNEP, 2014).

Although large firms are reportedly twice as likely as smaller companies to have a sustainability initiative such as monitoring environmental performance or human rights (UNEP, 2014), the extent to which this is put into practice varies considerably between organisations, and in different areas of the supply chain. For example, a study of U.S. firms found evidence of more involvement in sustainability initiatives in the domestic than the international context, perhaps

reflecting the greater pressure from environmental groups, the effect of federal and state tax incentives for sustainable investments, and the stricter enforcement of environmental regulations within the United States (Hashmi, Damanhour, & Rana, 2015). There is also evidence that firms outside the U.S. are now adopting sustainability programmes at a faster pace: in 2011 only 8 U.S. corporations were in the top 100 sustainable corporations, compared with 13 in 2010, and no U.S. corporations were in the top 10 (Hashmi, Damanhour, & Rana, 2015). Among these non-U.S. firms, there appears to be a greater likelihood of self regulation with regard to sustainability when they have multinational ownership or customers or export to developed countries with strict environmental regulations (Hashmi, Damanhour, & Rana, 2015).

Drivers of Change in Sustainable Supply Chain Management

Despite the variability in firm performance in this area, there is an undeniable trend in sustainable supply chain management, which is being driven by a number of key factors. These include in particular the global increase in sustainability regulations and reporting requirements; growing awareness of the business benefits of sustainability; changing public procurement practices and an increased demand among stakeholders and the general public for more sustainable business practices. Some key developments, facts and figures relating to these developments follow.

Global increase in sustainability regulations and reporting requirements

- Companies are increasingly subject to a wider range of sustainability regulations and reporting requirements both at home and internationally. These include government legislation and directives, as well as requirements increasingly being imposed by original equipment manufacturers and the demands of organizational shareholders (Hashmi, Damanhour, & Rana, 2015; Krawczyk & Warren, 2014).
- Within the European Union, the Directive on disclosure of non-financial and diversity information came into force in December 2014, affecting certain types of large companies and promoting greater transparency and accountability in areas relating to Corporate Social Responsibility. Member states are required to pass national laws based on this within two years (Global Reporting Initiative, 2015).
- The Global Reporting Initiative's Sustainability Reporting Guidelines is the most commonly used framework for reporting to stakeholders on corporate sustainability, used by around 2,500 private companies in 2012 of which around 90% were large companies (United Nations Environment Programme, 2014). The G4 updated guidelines issued in 2013 introduced an increased emphasis on sustainability in the supply chain (UNEP, 2014).
- There is a trend towards integrated reporting of financial, environment, social and governance information within a single report; the International

Integrated Reporting Council (IIRC), an international coalition of regulatory organisations, investors, NGOs and accounting firms, is developing a framework for this purpose (Valsan, 2014).

- In global industries with complex supply chains, multi-stakeholder initiatives are increasingly setting sustainability standards and developing monitoring systems. These include, for example, Life Cycle Initiative's Life Cycle
- Management System, which is concerned with promoting continuous improvement of environmental and social performance throughout the product life cycle.

Growing awareness of the business benefits of sustainability

- A survey of 335 enterprises conducted by the Aberdeen Group in 2008 found that almost half (48%) of those defined as “best in class” in terms of their sustainability initiatives identified the improvement of profits as one of the top three goals of their green supply chain program; of these, the mechanisms by which improved profits were expected to be achieved included: gaining a competitive edge or brand differentiation; achievement of preferred supplier status; increased market exposure, and expansion of the customer base (Schechterle & Senxian, 2008).

- In an employer survey conducted by BearingPoint in 2010-11, 47% of all respondents reported that a “green supply chain” produces a return on investment within just three years, and 70% of all companies surveyed agreed that there are economic benefits to be gained from sustainability.

- Reefke & Trocchi (2013) note that addressing sustainability considerations in business decision making helps reduce longer term risks arising from energy price fluctuations, waste management and pollution, among other factors.

- A 2014 Accenture report highlights that supply chain risk management helps companies avoid business disruption and the adverse impacts of supply and demand volatility, as well as improving stakeholder confidence and improving financial performance.

- Sustainable supply chain management is essential to minimise any risk of damage to a company’s brand image and reputation from unsustainable practices or human rights violations now that now that negative press and public comment are so rapidly disseminated around the world via the Internet (Franck, 2008). This is one of the major factors influencing the stringent use of sustainable supply chain management among leading global firms, which not only have complex supply chains but are especially vulnerable to brand related risks (UNEP, 2014).

- According to a 2014 international survey of 1,068 supply chain professionals, the most commonly cited reason for investing in sustainability initiatives is “creating a positive brand image”, but the factor that has increased most as an influence in recent years is “cost savings” (O’Marah, John, Blake & Manenti, 2014).
- A Grant Thornton report survey similarly found cost management to be the most important driver of sustainable business practices globally, with 67% respondents citing this, compared with 56% in 2011 (Grant Thornton, 2014).

Role of the public sector

- In many countries, the public sector is playing a key role in promoting sustainability through its own procurement activities and sustainable supply chain management. This encourages suppliers to improve their own sustainability practices, and has a knock-on impact throughout supply chains. A 2013 UNEP study reported that 56 countries have a government or ministry with a sustainable public procurement policy, a number expected to increase in future (cited in UNEP, 2014).
- In the US, Canada and many countries, federal and state/provincial

governments offer financial incentives such as tax rebates for sustainability related investments. Although voluntary in nature, Carbon Offset schemes are often promoted by governments to help achieve national GHG emission reduction goals, and are likely to have a similar effect of improving sustainability throughout supply chains (Hashmi, Damanhour, & Rana, 2015).

Stakeholder demands

- According to the Grant Thornton (2014) global survey of 2,500 businesses, the demands of clients and consumers is the second most important driver of sustainability initiatives, with 64% of respondents citing this factor.
- A PricewaterhouseCoopers (2014) report observes that investors are increasingly evaluating companies based not just on financial results, but on non-financial aspects of performance that influence their long-term prospects.
- In a global survey of more than 2,000 professionals in multiple sectors, 80% of companies surveyed reported that they had experienced consumer pressure to demonstrate supply chain sustainability (cited by ASSE, 2015).

The Art and Science of Sustainable Supply Chain Management

Achieving sustainable supply chain management can be very challenging, especially for those organizations that have outsourced many stages of the supply

chain. This means that many activities central to the achievement of sustainable supply chains will be under the control of separate and often multiple organizations, making them much more difficult to monitor and enforce. When supply chains are widely distributed across state or national boundaries, there is the added difficulty of ensuring that all relevant legislation and reporting requirements are identified and addressed.

In many ways, implementing sustainable supply chain management is little different to other organizational change initiatives, except that many of the key stakeholders whose involvement is crucial to the success of the initiative are external to the organization. There is increasing research-based evidence that, for organizational transformation projects to succeed, adequate attention must be given to people related factors in addition to change management tools and techniques, such as IT systems. For example:

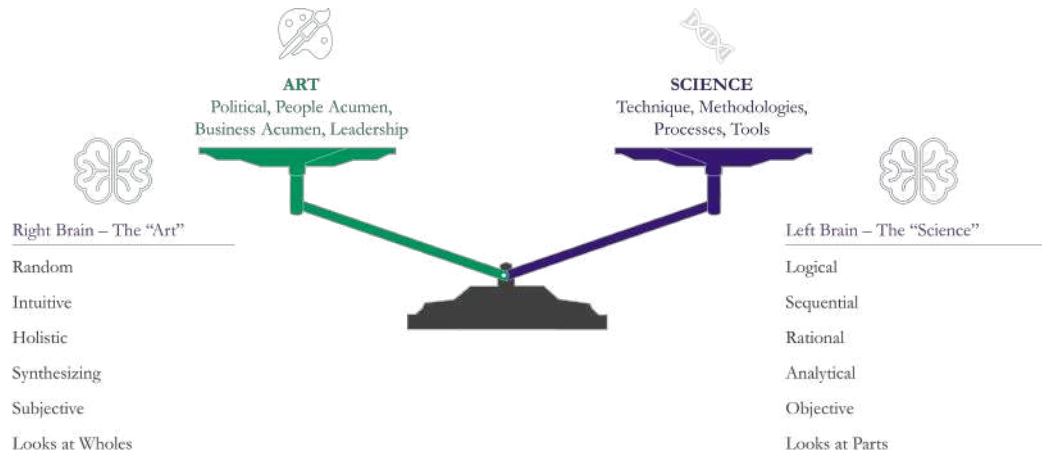
- In 2008, the IBM Global Making Change Work Study, found that the top two barriers to success were perceived to be “changing mindsets and attitudes”, cited by 58% of respondents, and “corporate culture”, cited by 49% of respondents (IBM, 2008).
- A 2008 McKinsey Global Survey of executives found that factors such as good communications, setting clear and high aspirations for change, engaging employees and involving senior leaders were most closely associated with success in organizational transformation projects (McKinsey and Company, 2008).
- The Economist Intelligence Unit (2008) found that the key elements of

success in successful initiatives were leadership, planning and communication.

Much of the literature relating to sustainable supply chain management focuses on the importance of IT systems for improving supply chain transparency, information sharing, monitoring and performance measurement, and on the importance of knowledge about relevant regulations, standards and compliance requirements. These are highly important aspects of the “science” of sustainable supply chain management.

Equally important however is the need to address the people-related and cultural aspects or the “art” of sustainable supply chain management. These include, for example, cultural realignment to support sustainability goals, ensuring there are adequate communications and awareness raising about the importance and expected benefits as well as compliance requirements, and that suppliers are supported in developing the skills and expertise needed to use the IT systems and contribute effectively to the sustainability initiative. What is most important in any organisational change initiative is achieving the right combination of art and science (see Figure 1)

Figure 1 – The Art and Science Balance



The
importance
of an art
and science
based
approach to
sustainable

supply chain management is reflected in the findings of research studies that have explored the perceived barriers and difficulties that arise when implementing this approach. Consistently, respondents have cited a combination of “art” and “science” related factors that can prevent success in this area and need to be addressed.

For example, in one Canadian study, interviews with “corporate experts” revealed that perceived barriers to shared responsibility for sustainability included costs, lack of awareness or understanding of sustainability, monitoring difficulties and issues relating to organizational culture (Morali & Searcy, 2011).

Similar factors emerged in OECD research that investigated the barriers to sustainable procurement in the public sector, conducted in 2010. Almost 80% of all procurement officials surveyed cited concerns about higher costs as a main barrier

to sustainable procurement; 45% said that a lack of monitoring mechanisms was a factor hindering the adoption of sustainable procurement and 42% said that they had little or no incentive to adopt this approach to purchasing (cited in UNEP, 2014).

Likewise, the UNEP Global Review found that the top five barriers to sustainable public procurement were expected higher prices, a lack of information and understanding about sustainable public procurement, lack of technical expertise in relation to environmental/social issues, low levels of interest and commitment from procurement system users, and insufficient legislation and regulation. In contrast, when respondents were asked to name the most important activities that would promote the use of sustainable public procurement, the most commonly cited were training and supplier engagement, more monitoring of sustainable procurement and its impact, life cycle costing, greater certainty about the legal aspects and improved procurement processes, with all these being cited by more than half of all respondents. (UNEP, 2014).

All of these survey findings highlight the importance of addressing both people-related factors as well as implementing effective systems and processes in order to achieve effective sustainable supply chain management. Another important aspect of an “art and science” based approach is to ensure that the initiative is implemented in a well co-ordinated, integrated way across the organisation and its

supply chain. Researchers have found that one of the barriers to sustainable supply chain management is that different groups within the organization typically deal with corporate sustainability initiatives and with supply chain management respectively, and are pursuing different and sometimes conflicting goals and processes (Cecere, 2014).

Achieving Sustainable Supply Chain Management with Art and Science

An art and science based approach to sustainable supply chain management is one which makes effective use of information technology, tools and specialist knowledge, but also which ensures that all supply chain participants have an adequate understanding of the overall benefits of the initiative as well as their own responsibilities, and are equipped not just with the technology but with the skills and capabilities necessary to fulfill these.

The use of high quality information systems is a crucial aspect of the “science” of sustainable supply chain management, as these will largely determine a firm’s ability to monitor supply chain activity and collect the data required for analysis and reporting purposes.

Enterprise Information Systems are being extensively used in supply chain

management and for the purpose of integrating this with other areas such as finance and customer relationship management (Lawrence et al., 2010; Whittaker & Beswick, 2008; Yusuf et al., 2004). The many reported spin-off benefits include improved efficiencies and cost reductions resulting from business process automation and access to business intelligence data for continuous organizational improvement (Yusuf, Gunasekaran and Abthorpe, 2004; Metaxiotis, 2011).

By automating and standardising as much as possible of the compliance reporting requirements, these systems also help to firms address stakeholder concerns about costs and time requirements, reduce the need for advanced knowledge and skills in reporting processes, and provide higher quality information and lower error rates (Krawczyk). Information systems also play an important role in facilitating communications and information flow among supply chain participants. This can help sustain commitment to the sustainability initiatives, help ensure that ongoing reporting requirements are fulfilled and facilitate collaborative working in support of program goals (Dao, Langella, & Carbo, 2011).

Where technology is being used to support sustainable supply chain management, there is evidence of its positive impact: an Aberdeen Group survey found that companies defined as “best in class” in terms of sustainability use technology in order both to enable improvements and track performance (Schechterle & Senxian, 2008). Particular useful tools in this respect are the widely used sustainability data

sharing platforms such as The Supplier Ethical Data Exchange (Sedex) and EcoVadis. These enable users to store, share, and report on data relating to the environment, health and safety, labour standards and business ethics, and are proving highly valuable in supply chain monitoring as well as benchmarking against other organizations. Equally important in supply chain management are the use of user-friendly reporting tools and methods such as the Balanced Scorecard, which can be used to clearly and succinctly report on progress against defined sustainability goals and industry standards (Cecere, 2014). Sharing sustainability data with supply chain participants using a Balanced Scorecard or similar technique is a valuable way of feeding back constructive information that can be used for continuous improvement purposes (UNEP, 2014).

No matter how effective a firm's IT and data systems are, however, these will seldom be sufficient to generate the attitudinal and behavioural changes necessary for achieving sustainability throughout the supply chain. This is where the "art" of organizational change is important. As Cecere (2014) observes, a "new way of doing business" is needed, and this requires a transformation in corporate culture and mindsets.

This change will only be possible if all supply chain participants have a sound knowledge and understanding of the initiative and the expected benefits to the whole supply chain of achieving shared sustainability goals. Just as importantly,

they must be supported with any training or skills development necessary for them to meet their obligations under the program, and provided with user-friendly systems that not only minimize the time and effort needed to do so but also generate valuable information that can be used for other business improvement purposes. Engaging with suppliers and involving them in the development of these systems and the initiative as a whole is likely to help reduce resistance and secure their co-operation with the program, while also helping to ensure that it is designed to generate maximum benefits and reduce sustainability-related risks to the organization.

While formal monitoring and reporting are important to demonstrate compliance with sustainability regulations and standards, promoting a culture of communication, trust, transparency and information sharing throughout the supply chain may be even more valuable as a means of achieving sustainable supply chain management in practice. Overall, the best recipe for success is an approach that combines the art and science of sustainable supply chain management in the most effective way to achieve the organization's sustainability goals and reduce the risks.

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Antecedents of Social Entrepreneurs Behaviour on Scaling up of Social Enterprise Impact

Anita Sharma
Assistant Professor
School of Management, Thapar University, India
anita.sharma@thapar.edu

ABSTRACT

Building upon extant literature this paper intends to propose and establish stewardship behaviour and entrepreneurial orientation as key antecedents of social entrepreneur behaviour. This paper also explores the mediation effect of organizational capabilities (SCALERS) between social entrepreneurial behaviour and scaling up of social enterprise impact. The framework reveals that the social entrepreneur's stewardship behaviour and entrepreneurial orientation positively contribute in scaling up social enterprise impact. And organizational capabilities (SCALERS) mediate this relationship. Towards the end, the paper elucidates implications and future research directions.

INTRODUCTION

Social Entrepreneur, is an emerging research construct with no universally accepted definitions (Austin, Stevenson, & Wei-Skillern, 2006). However scholars in social entrepreneurship research have agreed that she exhibits pivotal role in bringing novel and path breaking ideas to address society's most pressing problem (Light, 2006; Dees, 2007; Bornstein, 2007). The term social entrepreneur is variously defined in terms of the entrepreneur with a social vision and abilities to analyse, empathize, enthuse, communicate, enable, empower, advocate and mediate (Yunus, 2011; Sullivan Mort, Weerawardena, & Carnegie, 2003). Extant literature elucidates that like economic entrepreneurs, social entrepreneurs too require inputs in terms of specific behaviours and specialized skills which often cuts old silos by combining subject knowledge (in poverty reduction, education, healthcare etc.) with management and business (Yunus, 2011). However, unlike economic entrepreneur, at societal level they are governed by the legitimate expectations and exhibit positive externalities. And at individual level they are governed by human behaviour and exhibit non-profit maximization principles (Santos, 2012).

With 'behaviours' as key inputs social entrepreneurs work towards a desired social mission. They define their objectives (1) towards value creation through sustainable solutions (Santos, 2012), and (2) towards scaling up the impact of social enterprise (Bloom & Chatterji, 2009; J. Pearce & Kay, 2003). For instance, the meritorious activities of the archetypical social entrepreneur, Florence Nightingale are well

documented in health care system. She demonstrated social entrepreneurial behaviour by providing simple, integrated, and affordable care delivery models in healthcare for sustainable solutions (Haase-Herrick, 2005; Drayton, Brown, & Hillhouse, 2006; Bornstein, 2007). The key behavioural input for putting societal problems ahead of self-interest and profit maximization is *stewardship behaviour*. The construct stewardship behaviour is borrowed from family business literature due to similarity in its nature (Davis, Schoorman, & Donaldson, 1997). Similarly social entrepreneurial behaviour can also be best understood by her orientation towards risky, innovative and proactive activities to resolve societal problems (Morris, Webb, & Franklin, 2011; Lumpkin & Dess, 1996). Social entrepreneurs are becoming increasingly entrepreneurial not only to bring new and innovative products but also in founding new forms of organizations and developing novel business models (J. Pearce & Kay, 2003; Seelos & Mair, 2005). This can be depicted by *entrepreneurial orientation* of social entrepreneurs with respect to their motives, processes and outcomes for sustained solutions and scaling up of social enterprise (Morris et al., 2011).

Furthermore, social enterprises are engaged in mobilizing different *organizational capabilities* (forms of capital/ drivers) that are abundant, locally available and affordable (Bloom & Chatterji, 2009; Seelos & Mair, 2007). They do not thrive to attain competitive advantage. In fact they co-develop various mechanisms with stakeholders for sustainable solutions and *scaling up social enterprises impact* to have maximum reach (Bloom & Smith, 2010).

This study considers stewardship behaviour, entrepreneurial orientation, organizational capabilities and scaling up social enterprise as key constructs. Hence the objectives of this study are (1) to explore stewardship behaviour and entrepreneurial orientation as antecedents of social entrepreneurial behaviour, (2) to identify the relationship between social entrepreneurial behaviour (stewardship behaviour and entrepreneurial orientation) and scaling up social enterprise, and (3) to explain the effect of organizational capabilities between social entrepreneurial behaviour and scaling up social enterprise.

The remainder of the paper is sequenced as follows. In the next section I perform an extensive literature survey to identify the common strands between different constructs under study and develop propositions and a framework depicting relationships among constructs. The last section I present tentative outcomes, and implications.

REVIEW OF LITERATURE

The construct Social Entrepreneur had been seen from the perspective of a change agent with a problem solving mission (Dees, 1998; Martin & Osberg, 2007). It highlighted the qualities of the actor in terms of proactiveness (Weerawardena & Mort, 2006) and innovativeness (Leadbeater, 1997; Weerawardena & Mort, 2006; Leadbeater, 2007). These qualities help the social entrepreneur is to sense and recognize opportunities and find a fit between unmet societal needs and resources (Sullivan Mort et al., 2003). Social entrepreneur(s) exhibit the propensity to take

risk and the desire to address unmet or underserved societal needs (Mair & Marti, 2006). Literature focused on two broad aspects within a SE – (i) social entrepreneurial behaviour (Dees, 1998) and (ii) orientation towards entrepreneurial actions to scale up for societal transformation (Stam & Elfring, 2008; Alvord, Brown, & Letts, 2004; Bloom & Smith, 2010)

The existing literature on the behaviour of social entrepreneur closely mimics that of the economic entrepreneur. Social entrepreneurs emerge to meet basic human needs and act as social change agents (Brugmann & Prahalad, 2007). This emergence of the social entrepreneur is at abeyance to the profit seeking entrepreneur. Both social entrepreneurs and economic entrepreneur exhibit risk taking abilities, innovativeness and proactiveness to start their enterprise. But social entrepreneur either ploughs back her profit to enrich her service for society; or develops a subsistence model thus enlarging her stakeholder network and growth of social enterprise. (Dart, 2004; J. Pearce & Kay, 2003; Yunus, 2011). Social Entrepreneurship Initiative (SEI), Stanford University defines the scope of social enterprise as: (1) for-profit organizations with a social mission, and (2) not-for-profit organization with a social mission. For this paper, I have adopted social enterprise as not-for-profit organization.

Similarly stewardship behaviour has its linkages with societal normative expectations (Nicholls, 2010; Saltman & Ferroussier-Davis, 2000). Hernandez (2008) defines stewardship behaviour as “the attitude and behaviours that place the long-term best interests of a group ahead of [the] personal goals that serve an

individual's self-interests". Consequently, importation of stewardship behaviour within the SE construct conveys the sense of service, responsibility and partnership as opposed to self-interest, dependence and control that characterizes an economic entrepreneur (Block, 1993; (Davis, Schoorman, & Donaldson, 1997b). The presence of stewardship behaviour helps her to scale up impact of social enterprise (Davis et al., 1997b); .Bloom & Smith, 2010)

The constructs stewardship behaviour and entrepreneurial orientation leads to increased social enterprise performance which ultimately leads to societal transformation and sustainable solutions (Davis, Allen, & Hayes, 2010; Alvord et al., 2004; Santos, 2012). They provide robust evidences of positive relationship with enterprise performance. Hence these social enterprises expand their horizon and scope of working geographically. However, in this expansion process social entrepreneurial ways seeks resources/ capital (Bourdieu, 2008) which are either available ex-ante or created ex-post (Peteraf, 1993). Hence different types of capitals reflect the structure of opportunities and constraints available during scaling up of social enterprise.

Social entrepreneur's stewardship behaviour and scaling social enterprise impact

Extant literature elucidates that family business has greatly emphasised on the importance of 'stewardship behaviour' in day to day activities (Davis et al., 1997; Lumpkin, Steier, & Wright, 2011). Davis, Allen, & Hayes (2010) explain the

characteristics of a good steward. She takes care of family business assets and creates a legacy for future generations. The emphasis is also given on business leadership which is driven by altruism (Russell & Stone, 2002; Eddleston & Kellermanns, 2007; Lumpkin et al., 2011). Wherein, steward put external and internal stakeholders' interest ahead of her own interest. Stewardship behaviour of entrepreneurs in family business motivates stewards to act in the interest of stakeholders. Kelly (2001) suggests four strategies to earn the confidence of stakeholders, viz.

- (i) Reciprocity: gratitude towards stakeholders;
- (ii) Responsibility: acting in socially responsible manner;
- (iii) Reporting: sharing correct information, and
- (iv) Relationship nurturing: continued and long term relationship with stakeholders.

However the nature of stewards is similar to that of social entrepreneurs. They too keep stakeholders interest ahead of self-interest and work towards attainment of social mission. Due to the depiction of stewardship behaviour by social entrepreneur, stakeholders get attracted and decide to associate themselves for a long term relationship with social entrepreneur (Van Puyvelde, Caers, Du Bois, & Jegers, 2012).

In this paper, I used benevolence and loyalty as key characteristics of social entrepreneur's stewardship behaviour. *Benevolence and loyalty* acts as virtues of beneficiaries and support mechanism for stewardship behaviour (Welchman,

2008). ‘Benevolence’ is the extent of doing good without egocentric profit motive (Mayer, Davis, & Schoorman, 1995). Benevolence is considered as opposite side of opportunism. Hence a stakeholder who perceives greater benevolence from social entrepreneur is willing to accept greater risk in their personal relationships (Cruz, Gómez-Mejia, & Becerra, 2010). This leads to an increase in reciprocity and relationship nurturing.

Similarly ‘loyalty’ is understood as a virtue and capability of honouring the trust of trustor (Rosanas & Velilla, 2003). Here, ‘trust’ is the subjective expectations of the stakeholders. It is also sometimes considered as synonymous to commitment. Stakeholders often relate their identity to social entrepreneur’s identity. There are many indicators to loyalty (Powers, 2000). For instance, stakeholders thrive for long term association with social entrepreneur. And they always work towards attainment of the vision, value creating activities and social contribution. Donor and sponsors are always keen to work with growing social enterprise. They donate more funds for the programs that have helped in alleviation of social problems. This favourable ecosystem gives an impetus to the social enterprise to expand and scale up the social impact.

Proposition 1: Social entrepreneur’s ‘benevolent’ stewardship behaviour positively influences scaling up social enterprise impact.

Proposition 2: Social entrepreneur’s ‘loyalty’ stewardship behaviour positively influences scaling up social enterprise impact.

Entrepreneurial orientation and scaling social enterprise

The construct ‘entrepreneurial orientation’ is a much researched in economic entrepreneurs (Naldi, Nordqvist, Sjöberg, & Wiklund, 2007; Lumpkin & Dess, 1996). Entrepreneurial orientation can be understood as organization’s overall risk taking activities, innovation and proactive strategic action that exhibit support for uncertain environment and its relationship with firm performance (Lumpkin & Dess, 1996; Covin, Green, & Slevin, 2006; Naldi et al., 2007; Pearce, John, Fritz, & Davis, 2010; Covin & Wales, 2012). However, Sullivan Mort, Weerawardena, & Carnegie (2003) developed a multidimensional construct to understand entrepreneurial orientation in social entrepreneurs. Their constrained optimal model has been stated as $SVC = f(I, P, RM)$ subject to S ; SM ; and E where SVC: social value creation; I: innovativeness; P: proactiveness; RM: risk management; S: sustainability; SM: social mission; E: environment (Weerawardena & Mort, 2006; Voss, Voss, & Moorman, 2005; Morris, Webb, & Franklin, 2011). Morris et al. elucidates that the social entrepreneur’s entrepreneurial orientation varies in terms of motives, processes and outcomes. And the dimensions of entrepreneurial orientation viz. risk taking, innovativeness and proactiveness are not governed personal motive (like in economic entrepreneur) but by social mission of the enterprise.

Risk Taking: Extant literature on entrepreneurship elucidates that the risk taking is the act of entering into a costly commitment with an uncertain future. For social entrepreneurs, the outcomes include both social (loss in achieving social impact)

and financial aspects (financial losses) (Short, Moss, & Lumpkin, 2009). The risk taking dimension is also related to the availability of donors, access to networks, political support, volunteerism, favourable publicity (trust and reputation), and other resources. Sometimes social entrepreneur is also at risk when stakeholders believe that resources and funds are misdirected or over/ under utilized (Morris et al., 2011). The risk taken by social entrepreneurs would lead to increase in social returns (Weerawardena & Mort, 2006). However social entrepreneurs always look to scale up their enterprise to reach to larger mass.

Proposition 3: Social entrepreneur's risk taking behaviour positively influences scaling up social enterprise impact.

Innovativeness: Innovation is related to new combinations of factors of production. Hence Schumpeter called it 'creative destruction'. Social entrepreneurs are motivated to pursue innovations to provide more benefits to unmet social needs (Morris et al., 2011) and drive change in society (Moss, Lumpkin, & Short, 2010). Innovations positively affect entrepreneurial behaviour by developing a role model leadership (Fiol, Harris, & House, 1999) by unique products/ services, new production, distribution network, new labour supply and/ or new organizational structure (Roper & Cheney, 2005; Wiklund & Shepherd, 2003). The new and innovative products/ services would consequently lead to increase an impact on society (Weerawardena & Mort, 2006). And social enterprises want to capture and penetrate deep into the society with unmet needs.

Proposition 4: Social entrepreneur's innovativeness positively influences scaling up social enterprise impact.

Proactiveness: Proactive behaviour is related to actions taken in anticipation of opportunities or problems in advance of others (Morris et al., 2011). Hence, it depicts forward looking attitude of entrepreneurs (Lumpkin & Dess, 1996a). Social entrepreneurs are required to be proactive in opportunity identification/ recognition, social innovations and fund raising. They need to initiate change or be the first one to introduce new and innovative products/ services for needy people in the society (Naldi et al., 2007). The presence of proactiveness in social entrepreneurs would consequently lead to superior social enterprise performance (Weerawardena & Mort, 2006). A social entrepreneur always envisages the opportunities into untapped markets. Hence they act proactively to cater to unmet needs of the society.

Proposition 5: Social entrepreneur's proactiveness positively influences the scale of social enterprise impact.

Organizational capabilities as a mediating variable

Existing literature posits that social entrepreneur is governed by stewardship behaviour to establish a venture with a social mission in hand. Her motive is to earn social enterprise growth and greater social impact. She takes risk, acts proactively and comes up with innovative solutions to cater to unmet societal needs. Research also elucidates that social entrepreneurs faces various challenges

to attract and retain different forms of capital viz. financial, human, social, political and physical capital (Bourdieu, 2008). For instance, financial capital like grants, donations (cash & kind), venture philanthropy, loans and partnerships are not easily available (Barney, 1991; Bloom & Smith, 2010). Also due to presence of negligible financial benefits with social enterprise it becomes more difficult to persuade stakeholder (human/ social capital) like volunteers, donors, suppliers and distributors, communities, partners etc. (Bloom & Chatterji, 2009; Bloom & Smith, 2010; Luthans & Youssef, 2004). Hence investors are required to be motivated by the prospect of impact rather than prospect of profits (Santos, 2012; Nicholls, 2010).

In the context of social entrepreneurship, Bloom & Chatterji propounded organizational capabilities (drivers) as Staffing, Communications, Alliance building, Lobbying, Earnings generation, Replication, and Stimulating market forces (SCALERS). Social entrepreneur's organizational capabilities are to create, develop and maintain financial, human, social, political and physical capital (refer to Table 1).

The organizational capabilities (SCALERS) positively mediated the relationship between social entrepreneur's stewardship behaviour and performance of the social enterprise (Dees, Anderson, & Wei-Skillern, 2004; Bloom & Smith, 2010). In other words, the social entrepreneur's benevolent and loyal behaviour has a positive mediation effect of staffing, communication, alliance building, lobbying, earning generation, replication and stimulating market forces (SCALERS) on social

enterprise performance and social impact. Similarly, social entrepreneur's entrepreneurial orientation (risk taking, innovativeness and proactiveness) has a positive mediation effect of staffing, communication, alliance building, lobbying, earning generation, replication and stimulating market forces (SCALERS) i.e. organizational capabilities on social enterprise performance and social impact.

Proposition 6: Organizational capabilities (SCALERS) mediate the relationship between social entrepreneur's stewardship behaviour and scaling up social enterprise impact.

Proposition 7: Organizational capabilities (SCALERS) mediate the relationship between social entrepreneur's entrepreneurial orientation and scaling up social enterprise impact.

SCALERS	Capital
Staffing: creating, developing and maintaining labor pool (employees, volunteers, interns)	Human capital(Becker, 1964; Bourdieu, 2008)
Communication: creating, developing and maintaining positive attitude of stakeholders towards social enterprise programs Alliance building: creating, developing and maintaining partnerships, joint ventures, coalitions	Social/ Political Capital (Coleman, 1988;

and other linkages Lobbying: creating, developing and maintaining relationships with administrative agencies political leaders	Bourdieu, 2008)
Earnings generation: creating, developing and maintaining efforts for donations, grants, sponsorships, membership fees, awards and other financial resources. Stimulating market forces: creating, developing and maintaining incentives, micro-loans, inexpensive health, educational and farming solutions.	Financial Capital(Bloom & Chatterji, 2009)
Replication: creating, developing and maintaining potential capacity to reproduce itself in terms of innovations in products and services; and infrastructure.	Physical Capital (Barney, 1991; Bourdieu, 2008)

Table 1: Classification of SCALERS and different forms of capital

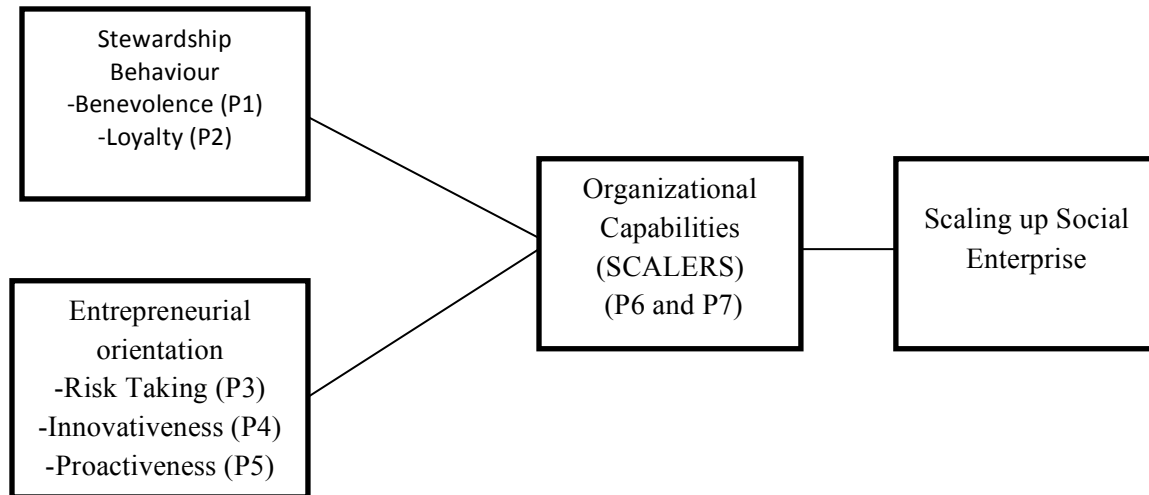


Figure 1: A theoretical model presenting relationship between Stewardship Behaviour, Entrepreneurial Orientation, Organizational Capabilities and Scaling up Social Enterprise

There are only a few studies which elucidates antecedents of social entrepreneurial behaviour (Santos, 2012; Morris, Web & Franklin., 2011; Weerawardena & Mort, 2006; Hernandez, 2008; Alvord, Brown & Letts, 2004; Mort, Weerawardena & Carnegie, 2003). The key construct stewardship behaviour, however is studied in family business literature (Short et al., 2009; Davis et al., 2010; G. T. Lumpkin et al., 2011; Chirico, Sirmon, Sciascia, & Mazzola, 2011). The review suggests that the nature (serving others ahead of self-interest) of stewardship behaviour in family business leader resembles to social entrepreneur. However no study so far has

attempted to identify ‘stewardship behaviour’ as an antecedent of social entrepreneurial behaviour and its relationship with scaling up of social enterprise. Similarly, ‘entrepreneurial orientation’ is a behavioural antecedent of an entrepreneur (Lumpkin & Dess, 1996). It is largely explored in economic entrepreneurship literature and explored the linkages with firm performance. However in social entrepreneurial context, theoretical literature suggests that social entrepreneur take risks, act proactively and innovate to provide high quality and affordable products and services to needy people and work ahead of self-interest (Weerawardena & Mort, 2006; Morris et al., 2011). The social entrepreneurial behaviour leads to increased social impact. But the literature still lack empirically tested studies to validate the social entrepreneurial orientation and its social impact and scaling up of social enterprise. Hence this untapped and unexplored gap needs to be tested.

Strategic management literature is well examined in resources/ organizational capabilities as a construct and its relationship with firm performance. However, in social entrepreneurial context Bloom & Chatterji (2009) and Bloom & Smith (2010) developed SCALERS (Staffing, Communications, Alliance building, Lobbying, Earnings generation, Replication, and Stimulating market forces) construct and also developed a scale to measure it in relation with scaling up of social enterprise. In Bloom & Smith (2010) SCALERS is studies independent variable. But no study so far has studied mediating role of SCALER between social entrepreneurial behaviour and social enterprise scalability and impact.

Hence it is evident from the above explored literature that no study empirically tested stewardship behaviour and entrepreneurial orientation as antecedents of social entrepreneurial behaviour and its consequences in terms of scaling up of social enterprise. However relationship between organizational capabilities and scaling up of social enterprise is explores a little. Now gaps into above mentioned social entrepreneurship literature, makes it imperative to explore further. Hence, this study posits following research questions:

Ceteris paribus, does social entrepreneur's stewardship behaviour as an antecedent behaviour leads to scaling up of social enterprise?

Ceteris paribus, does social entrepreneur's entrepreneurial orientation as an antecedent behaviour leads to scaling up of social enterprise?

Ceteris paribus, does social entrepreneur's stewardship behaviour and entrepreneurial orientation has any effect of organizational capabilities on scaling up of social enterprise?

IMPLICATIONS

Social entrepreneurship scholars may find this study helpful as it establishes stewardship behaviour as an antecedent of social entrepreneur behaviour. And they can further explore this behavioural antecedent with other dimensions such as commitment, altruism or trust. Stakeholders especially donors or philanthropic venture capitalists can make investment/ funding decisions based upon social entrepreneur's entrepreneurial orientation and social enterprise impact at large.

However anticipated results suggest that social entrepreneurs are not high risk takers. Hence individual donors are likely to make more investment for their self-contentment. Social entrepreneurs would work with dedicated staff, build strong network with bureaucrats/ local leaders and replicate the existing way of working to create greater social enterprise impact. They would want to expand their operations geographically to provide high quality and affordable products/ services. Policy makers/ government can propose social entrepreneurship educator course at school level to develop stewardship behaviour and make student orient towards societal problem solving venture. Hence young students can prepare themselves to choose social entrepreneurship as an alternate career option.

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Junpu “Taobao” Village – a validation of Porter’s Diamond Model?

*Dennis Poh Wah Lee, Business Administration Department, Business School,
Shantou University, China*

*Jens Mueller, Waikato Management School, The University of Waikato,
New Zealand*

Purpose:

This paper (case study) examines the validity of Michael E Porter’s Diamond Model through empirical observations of the revitalization, development and changes of Junpu “Tabao” village brought about by rapid growth of e-commerce in China.

Design/methodology/approach:

The paper takes a qualitative approach to review selective literatures, research papers and site interviews on the innovation and growth of e-commerce in Junpu Village in China in recent years; and examines the validity of Michael E Porter’s Diamond Model through this phenomenon.

Findings:

This case study of Junpu Taobao village validates the relevance of Michael E. Porter’s Diamond Model (even) for e-commerce, and supports the view that

clustering of e-commerce vendors may be the right developmental pattern for China's e-commerce industry.

Porter's Diamond Model implies that any country can create economic prosperity by systematically cultivating new, superior factor endowments (infrastructure, education, capital generation, etc.) initiated by the government and often in collaboration with the private sector, to develop high-value-adding industries that generate substantial wealth.

Practical Implications:

Managers should develop an improved awareness of the rapidly evolving innovative enterprise of e-commerce in China.

Originality/value:

The paper attempts to validate Michael E Porter's Diamond Model through empirical observations of the revitalization, development and changes of Junpu "Tabao" village brought about by rapid growth of e-commerce in China analyse and synthesize the findings of literatures and site interviews.

Introduction

E-commerce in China has taken the world by storm. Online retail sales in China reached 1.85 trillion yuan in 2013, accounting for 7.9% of total retailing.¹ By 2017, total online sales are expected to reach 4.45 trillion yuan, accounting for 12.4% of the total retail sales. And by 2020 the total e-commerce market is predicted reach 13.91 trillion yuan (US\$2.17 trillion) accounting for 26.7% of total retail sales according to Kantar Retail.² The burgeoning e-commerce market has fueled and boost the expansion China's retailing industry. And the most notable is the phenomenal growth of a group of e-commerce entities in China known as the "Taobao" villages.³

McKinsey Global Institute (MGI) in its report on China's e-commerce: *China's E-tail Revolution: Online Shopping as a Catalyst for Growth* (2013)⁴ depicted e-commerce as a powerhouse industry. In 2014, there were 649 million internet users. Some 27% were from the rural areas.⁵

By 2015, the Internet users in China will have accounted for 50% of the total population, reaching 662 million.⁶ It is estimated that China's e-commerce sale will surpass that of the United States by USD 200 billion in the same year.

¹ "Online shopping in China in 2013." 17 March, 2014. iResearch. Retrieved from <http://www.iresearch.com.cn/View/228673.html>. See also AliResearch, 2013, p8. Retrieved from <http://vdisk.weibo.com/s/uvvSmakmtIjXc?sudaref=www.baidu.com>.

² See <http://www.chinainternetwatch.com/15905/64-double-11-2015-shoppers-double-11-2016/>

³ "Taobao village", defined by AliResearch, refers to a critical mass of online vendors concentrating in a village and doing C2C business through Taobao platform.

⁴ McKinsey Global Institute. (2013). *China's E-tail Revolution: Online Shopping as a Catalyst for Growth*. Retrieved from <http://ishare.iask.sina.com.cn/download/explain.php?fileid=61612861>

⁵ See <http://technode.com/2015/02/03/chinese-internet-users-reached-649m-2014cnnc-report/>

⁶ Alibaba (2013). The world's greatest bazaar. *The Economist*. Retrieved from <http://www.economist.com/news/briefing/21573980-alibaba-trailblazing-chinese-internet-giant-will-soon-go-public-worlds-greatest-bazaar>

Meanwhile, mobile online shoppers are on surge with China becoming the world's biggest market for smartphones. Purchases through mobile phones leapt from 2 billion yuan in 2010 to 53 billion yuan in 2012, and iResearch estimates the total transaction value of mobile shopping to exceed 3,207 billion yuan by the 2017, up from 274 billion yuan in 2013.⁷ These data convincingly confirms the fact that e-commerce in China is growing phenomenally. And it is no coincidence that this phenomenon is in tandem with the significant development and growth of “Taobao” villages in the country.

In her report: *"Taobao Villages" in Rural China Grow Tenfold in 2014*⁸ Susan Wang noted that e-commerce continued to surge in rural China in 2014, with the number of “Taobao” villages growing more than tenfold from 20 at the end of 2013 to 211 in 2014. And a ‘star’ amongst these is Junpu “Taobao” village. This paper examines the validity of Michael E Porter’s Diamond Model through empirical observations of the revitalization, development and changes of Junpu “Tabao” village brought about by rapid growth of e-commerce in China.

⁷ “Mobile shopping in China in 2014.” 25 July, 2014. iResearch. Retrieved from <http://www.iresearch.com.cn/View/235334.html>.

⁸ See <http://www.alizila.com/report-taobao-villages-rural-china-grow-tenfold-2014>.

Michael E Porter's Diamond Model

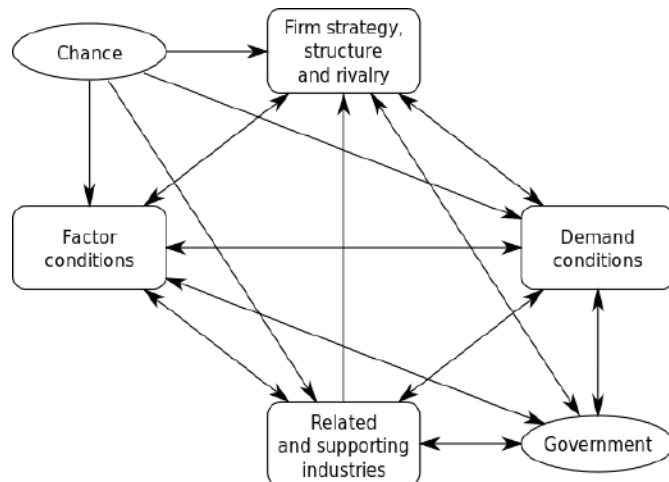


Figure 1. Porter's Diamond Model

Michael E Porter developed an economic model, popularly known as the **Diamond Model** in his book *The Competitive Advantage of Nations*,⁹ where he explains why particular industries become competitive in particular locations.¹⁰

The approach looks at clusters,¹¹ a number of small industries, where the competitiveness of one company is related to the performance of other companies and other factors tied together in the value-added chain, in customer-client relation, or in a local or regional contexts.

Six factors are considered for the analysis of competitiveness:

- **Factor conditions** are human resources, physical resources, knowledge resources, capital resources and infrastructure. Specialized resources are often

⁹ Porter, M.E. *The competitive advantage of nations*. New York: Free Press. (1990)

¹⁰ Traill, Bruce; Eamonn Pitts (1998). *Competitiveness in the Food Industry*. Springer. pp. 17–19. ISBN 0-7514-0431-4

¹¹ Porter, M.E. *Location, Competition, and Economic Development: Local Clusters in a Global Economy*, Economic Development Quarterly, Vol 14, No.1, pp 15-34, 2000. A business cluster is a geographic concentration of interconnected businesses, suppliers, and associated institutions in a particular field. Clusters are considered to increase the productivity with which companies can compete, nationally and globally.

specific for an industry and important for its competitiveness. Specific resources can be created to compensate for factor disadvantages.

- **Demand conditions** in the home market can help companies create a competitive advantage, when sophisticated home market buyers pressure firms to innovate faster and to create more advanced products than those of competitors.
- **Related and supporting industries** can produce inputs that are important for innovation and internationalization. These industries provide cost-effective inputs, but they also participate in the upgrading process, thus stimulating other companies in the chain to innovate.
- **Firm strategy, structure and rivalry** constitute the fourth determinant of competitiveness. The way in which companies are created, set goals and are managed is important for success. But the presence of intense rivalry in the home base is also important; it creates pressure to innovate in order to upgrade competitiveness.
- **Government** can influence each of the above four determinants of competitiveness. Clearly government can influence the supply conditions of key production factors, demand conditions in the home market, and competition between firms. Government interventions can occur at local, regional, national or supranational level.
- **Chance** events are occurrences that are outside of control of a firm. They are important because they create discontinuities in which some gain competitive positions and some lose.

The Porter thesis is that these factors interact with each other to create conditions where innovation and improved competitiveness occurs.¹²

The revitalization, development and changes of Junpu “Taobao” village

Junpu “Taobao” village, the case in this paper, was a small and unknown village. Yet, over the past two years, it has attracted thousands of e-entrepreneurs and has transformed itself into a hotspot for e-commerce startups.¹³

On 17 November 2014, a delegation from Shantou University led by Professor Shlomo Maital from The Samuel Neaman Institute for Advanced Studies in Science and Technology, Technion Israel Institute of Technology, made a study visit to Junpu village, Jieyang City, Guangdong Province, China. These findings were recorded.

Junpu village is one of twenty “Taobao villages” spread across China in 2013.¹⁴ The Chinese government provided an incentive package and through the entrepreneurial drive of its residents in just over 490 homes, this hamlet of 2,695 people has become a successful e-commerce hub with about 3,000 e-commerce stores.¹⁵

The average monthly turnover of between 100 to 150 million renminbi with an average 15% margin. Start-up cost of these e-commerce stores can range from

¹² Traill, Bruce; Eamonn Pitts (1998). *Ibid*.

¹³ So, Zhang, J. J. (2013). The visible hand pushes Jieyang Taobao Village. Retrieved from http://epaper.oeeee.com/D/html/2013-11/13/content_1969373.htm

¹⁴ According to AliResearch 2013, 20 ‘Taobao villages’ have been identified. This has increased to 211 in Dec 2014.

¹⁵ McLaughlin, K.E., ‘Alibaba and the rural capitalist – a modern Chinese fable’, Nikkei Asian Review, asia.nikkei.com/print/article/25434.

several thousand renminbi to several hundred thousand renminbi. But Junpu Village has a financial service company, Puhui Financial Services Center of Jieyang City that offers a variety of financial services such as investment, financing, and insurance. The government also subsidizes up to 50% of loans interest.

According to Alibaba Group, the Chinese Internet giant, Junpu is one of the country's top 10 most profitable "Taobao villages". China's top online company, also identified a growing number of rural townships and villages across China that are turning to e-commerce as an alternative to emptying out.

E-commerce and Taobao stores started to flourish rapidly in Junpu village in 2012 with the support of the government. Among the pioneers to do so was Xu Zhuangbin, now 23, when he decided to bring his business home. Xu had started a lucrative Taobao boutique when he was a migrant factory worker in Guangzhou. Business was good, but Xu wanted to move back to his home and family. Since then, according to Zhen Hongguang, the village chief, the majority of the residents either own or work for Taobao shops.

Huang Jiexi, a 25-year-old who opened an online denim store with his parents, says e-commerce has made it much easier for young people to stay in their hometown. His family, which operates a small storefront as well as the Taobao

shop, is new to the world of e-commerce, but they are convinced it is a much better way to make a living than factory work.¹⁶

The majority of e-commerce shops in Junpu market apparel produced in nearby factories. Many of the sellers have typically either worked in those factories or have had connections with them. They know the latest trends and where the best deals are.

A typical wholesale shop selling handbags in Junpu village will sell about 20 pcs daily. But during festive seasons, for example, on ‘ Singles day ’ on 11th November, with promotions the demand can increase tenfold to 200 pcs on a single day.

There are two categories of e-entrepreneurs in Junpu village. There are the middlemen – those who only trade but do not own products, and those who market their own products. Among these e-entrepreneurs there are a good number of youngsters in their early to mid-twenties whose dream is to own their business. Junpu village looks like any other rural village in China that is relatively quiet during the day and business isn't apparent when entering the village. But after dusk around 5pm, when online shoppers around the country start clicking, the village turns lively and activity starts to buzz. People get around the stores, checking and dispatching orders for delivery across China.

In total, the village has 13 logistics companies, which carry products from the village to overnight mail service centres. There is also a “Taobao Daxue Café” that has been set up for the informal sharing of ideas and best practices about e-

¹⁶ McLaughlin, K.E., ‘Alibaba and the rural capitalist – a modern Chinese fable’, Nikkei Asian Review, asia.nikkei.com/print/article/25434. Ibid.

commerce. The café is visited by a community of practice comprising mostly young e-entrepreneurs.

The Role of Government in Scaling Taobao villages

Chen Ying Cong, Vice Secretary, Communist Youth League Guangdong Jieyang Municipal Party Committee explained that the local government has played a major role in developing this particular "Taobao village" providing infrastructure support such as high-speed broadband network that is free for residents. It offers free space for sellers who are new to the game, and it can help arrange very affordable financial loans if required. It has also set up a training centre to provide training for people from poor villages. Classes were conducted for young entrepreneurs who came from all over China including Hong Kong and Taiwan. Each program last 20 days in groups of 30 people. In late 2014, an e-commerce training session was conducted for more established e-entrepreneurs to train them to become entrepreneurs.

According to Yang Yanbin, Deputy Director, Jieyang E-commerce Development Office, the government has a 2-year plan to train 100,000 e-entrepreneurs in Junpu Village. 57 companies collaborated with the local government to provide training which is heavily subsidized. About 40,000 trainees have completed their training stint last year. The objective of these sessions is to provide quality e-commerce training and invite industry experts to give talks.

In a dinner conversation with Kong Bo¹⁷, he commented that the training program that municipal government provides hope to address the issues of product design and quality as the current competition intense e-commerce market forces e-entrepreneurs to address these issues. When asked if there were too many e-entrepreneurs, he said that 100,000 e-commerce entrepreneurs are not too many for China. The goal is to be the best-in-class e-commerce centre in the country and those trained will go to other provinces to do business. The next phase of training will focus on local enterprises in various industries to enable them to sell their products online.

On 20th March 2014, the Junpu village municipal government also fully funded and conducted its first e-commerce training course for a group of 20 young South Africans (in their 20s) under the Joint China-South Africa cooperation program. This is an exchange program which it hopes to open up the African market for Chinese goods.

The recent inception and rapid development of “Taobao villages” has brought vitality to rural villages and China has embarked on an important step in the process of rural modernization. Specifically, it helps increase the income of the rural people that narrows the urban-rural income gap. Some of the “Taobao villages” such as Junpu village in Guangdong, with the support of local government, has taken a further step by supporting the ‘Taobao concept’ through strengthening the village’s IT infrastructure, financial assistance, opening a

¹⁷ Kong Bo, Secretary, Communist Youth League Guangdong Jieyang Municipal Party Committee.

training center to teach people how to sell online as well as fermenting a ‘community of practice’ of young e-entrepreneurs.”¹⁸

However, the forecast is not rosy. While e-commerce businesses have boomed in Junpu over the last two years, more than half of them are selling the same clothes. Xu, Chairman of Junpu E-commerce Association, said: “Especially for those people who just sell other people’s clothes, they usually wage a price war with each other to attract more customers, which leads to lower and lower profits.”¹⁹ Xu Bodong, the vice secretary-general of Guangdong Province Electronic Commerce Association, is concerned that although Junpu is in the first, booming stages of a “Taobao village,” its fortunes could nosedive if it doesn’t innovate and diversify.²⁰

A validation of Michael E Porter’s Diamond Model?

Does the phenomenal revitalization, development and growth of Junpu “Taobao” village validate Porter’s Diamond Model?

As noted above, Factor conditions refers to human resources, physical resources, knowledge resources, capital resources and infrastructure (including information technology). Specific resources can be created to compensate for factor disadvantages. Near Junpu village the airport and high-speed train station are located easy access to the highway. There are a lot of empty factory buildings in

¹⁸ “Cash cow, Taobao.” 24 May 2014. The Economist. <http://www.economist.com/news/china/21602755-one-small-hamlet-teaching-people-how-sell-online-cash-cow-taobao>.

¹⁹ Cited from <http://myshantou.org/guangdongs-first-e-commerce-town.html>

²⁰ Cited from <http://myshantou.org/guangdongs-first-e-commerce-town.html>

the village. The storage and labour costs are low in the countryside. With these advantage, the e-commerce business went on prosperously, which led to the whole village starting their Taobao business. Within 2 years, 70% of the families, about 2,700 people are engaged in the e-commerce business, over 3000 online stores and 250 physical stores were set up, with products category extended from garment to leather-ware, ironware, bicycles, electric appliances and toys. E-Enterprise lectures are held every week. The network in Junpu is the fastest in Chaoshan area and the cheapest in the whole Guangdong Province. Over 13 logistics companies are also stationed here. The Taobao technological reform that enabled people to run business as long as there is internet rapidly accelerated Junpu's urbanization. Strong clusters have contributed to knowledge or expertise spillovers in the village with regular lectures or training programs organized by the government and the association.

One of the most challenging concerns for start-ups is the lack of capital. However, in Junpu Village, interest-free or low-interest-rate capital is provided to these e-entrepreneurs. The government played an important role of a propeller at the beginning. Subsequently, when the business environment became positive the private sector jumped in and contributed to the positive development of the eco-system. The government through its administrative influence encouraged financial institutions to move in. It also launched some projects to spread fundamental financial knowledge and created an environment for financial services. In November 2013, People's Bank of China Jiedong Branch organized an activity

with the financial institutions in Jiedong District and Tonglian Pay Company to teach the villagers financial knowledge. The government then released a series of rules and regulations to normalize the financial industry (such as *Interim Procedures of Loan Risk Compensation for Junpu E-Enterprises*, *Interim Procedures of Subsidized Loan for Junpu E-Enterprises*, *Procedures of Junpu Enterprise Establishing Guiding Foundation*). Shortly after, the private enterprises got involved. In 2014 April, Pratt & Whitney set up a Financial Services Center in Guangdong to provide investment and financing products and capital, raising services for the Junpu e-enterprises. In 2014 September, the first internet financial enterprise in Junpu, Winwindai Inc., Junpu branch was founded, providing fund raising and personal financing services. To extend the channel for private capital, the Jieyang municipal government encouraged applicants to set up countryside banks, small loan companies, fund support groups, financial lease companies and third-party payment.

With the rapid development of e-commerce in Junpu, a cluster began to form in the surrounding area. Rong Cheng Shoes Association set up an 800-square meter e-commerce services center in Junpu to supply high quality goods for the e-businessmen and guided the association members with branding so that the influence of the shoes industry will be extended. Puning International Garment Market set up the Jieyang Huaermei E-Commerce Wholesale Market with the invested 100 million RMB in Junpu. The project aimed to build the No.1 wholesale market in Guangdong.

Wang and Liu (2014) attributed the rapid development of e-commerce development in Junpu village to several elements, including an entrepreneurial spirit rooted in Chaoshan people's genes.²¹ Typically, due to a conservative culture, villages adopt a "risk minimization" instead of "profit maximization" mentality making it more difficult for the villages to accept new business models such as e-commerce. However, the spirit of entrepreneurial risk-taking in Chaoshan culture enables the local villagers to forge ahead.

Thus, these factor conditions became competitive advantages that spurred and accelerated the growth of e-tailing in Junpu village.

According to Porter, 'Demand conditions' in the home market can help companies create a competitive advantage, when sophisticated home market buyers pressure firms to innovate faster and to create more advanced products than those of competitors. However, demand conditions of e-commerce are unique – customers are not confined within a Junpu village or even Jieyang city. With e-tailing, the entire China is connected to the Junpu village. Guo, Liang & Luo (2014) noted that "clusters of linked vendors play a crucial role in giving rise to demand-side advantages as clusters reduce consumer search costs and may result in informational externalities of sophisticated and demanding customers".²² Also, with easy access to online information, online customers do not lack and can

²¹ Wang, Y., Liu, L. (2014). "The Metamorphosis of Junpu Village" (translated from Chinese) in 中国淘宝村; "□埔村"□形□ pp18-29; 阿里巴巴的阿里研究院; 2015-02-01. ISBN : 9787121250750

²² Guo Guihang, Liang Qian, Luo Guangfan. (2014) *Effects of Clusters on China's E-Commerce: Evidence from the Junpu Taobao Village*, International Journal of Business and Management; Vol. 9, No. 6; p. 185.

readily find alternative sources especially if products are similar. Hence, vendors have to constantly innovate and differentiate or perish.

In Junpu village, the government worked with the e-enterprise association to prevent the cut-throat competition and facilitate honest trading. Xi Chang Town E-enterprise Association of Jiedong District was founded in July of 2013. The board of directors are 11 young entrepreneurs who first came back home to start their businesses. Now there are 105 member enterprises. Though the association is still at its infancy stage, it has already implemented policies to avoid homogenization and vicious competition through industry self-regulation. It has stipulated that the members cannot imitate each other but innovate autonomously, otherwise there will be a penalty of 20,000 RMB. Also the government and the association founded a trust foundation and promoted emphasis on product quality by setting ten rules regarding “Penalty for Fake”.

Related and supporting industries provide cost-effective inputs and also participate in the upgrading process, thus stimulating other companies in the chain to innovate. This is a major competitive advantage of Junpu village.

In Jieyang, the city where Junpu is located, there are a lot of developed private enterprises. The garment, ironware and jewelry-processing industries provide favourable support for e-commerce. Especially for the garment industry, the complete industrial chain of cloth materials-colouring-garment processing provides a lower cost price than that in major cities such as Beijing, Shanghai, Guangzhou and Shenzhen. All kinds of professional services providers moved into Junpu,

providing a series of services covering from supply, storage, designing, marketing, job training to delivery. Vendors can avail themselves to a series of supporting services such as product shooting, photo editing, product description making, data packet collecting, operation planning and market planning. Service providers like Guangdong Yiku E-Commerce Supply Chain Inc. provide professional and complete e-commerce services in supply chain. It also provides professional services of visual packaging and marketing, connects the offline manufacturers with the online retail stores, and works on the centralized management of the goods for small and medium-sized e-enterprises, allowing those who does not have enough capability for storage to run the business with “no-cost, no-storage”; thereby improving the efficiency of the whole e-commerce supply chain. This cluster of related and supporting industries should make it easier for vendors to innovate and differentiate to meet the increasing demands of netizens.

Firm strategy, structure and rivalry refers to the rules, incentives, and norms governing the type and intensity of local rivalry. In e-tailing, the presence of intense rivalry is not limited to within Junpu village but also regionally, if not nationally. This would create pressure to innovate in order to upgrade competitiveness. Vendors adopted low-price tactics to woo customers prior to the development of clusters. But as rivalry intensifies numerically, firms have had to adopt differentiation marketing strategies to cope with competition. Intense rivalry fuels innovation and product differentiation. The emergence and expansion of Junpu village cluster is being driven by a need to differentiate. E-tailers, faced with

intense competition and rivalry, (is forced to) realize that innovation, not imitation, is the road to sustainability and success. In the case of Junpu, being a village setting where there is also kindred spirit, vendors not only compete but also learn to collaborate for survival. Innovation is rapidly learned and imitated. This would increase the *desire* to innovate. The challenge is knowing how to do so.

Porter noted that Government can influence each of the above four determinants of competitiveness. This is indeed the case for Junpu village. As noted in our interaction of the local government, it has played a major role in developing this particular "Taobao village" providing infrastructure support such as high-speed broadband network that is free for residents. It also provides free space for sellers who are new to the game, and it can help arrange very affordable financial loans if required. It has also set up a training centre to provide training for people from poor villages.

In the words of Porter²³: "[Government] policy should promote specialization, upgrading, and trade among regions. Cluster formation can be encouraged by locating specialized infrastructure and institutions in areas where factor endowments, past industrial activity, or even historical accidents have resulted in concentrations of economic activity". And this is the case for Junpu village. Strong local government support and initiatives led to cluster formation in Junpu village – see Figure 2 below.

²³ Michael, E. P. (1996). *Competitive Advantage, Agglomeration Economies, and Regional Policy*. International Regional Science Review, 19, nos. 1 & 2. p85.

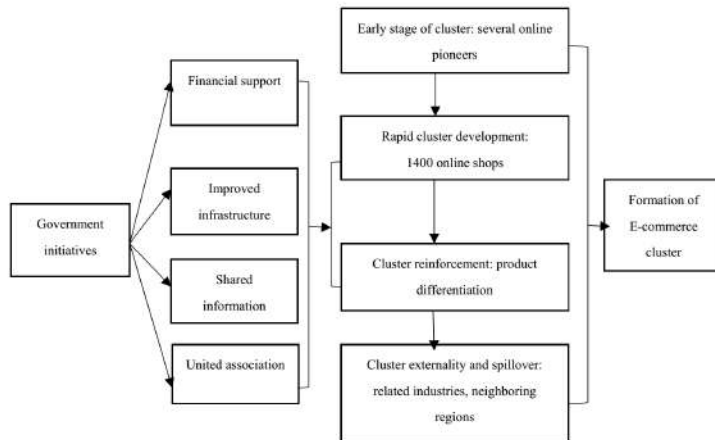


Figure 2: Formation of cluster in Junpu Village (Source: Guo, Liang & Luo [2014])

Guo, Liang & Luo (2014)²⁴ finds significant and positive clustering effects in the Junpu Taobao Village. They concluded that online vendors who co-located with each other have greater competitive advantages than isolated counterparts as it has the largest number of internet start-ups as well as small-and-medium sized enterprises (SMEs). By enjoying the knowledge spill-overs and the capital support provided by governments, e-tailing shops are able to improve their chance of survival. Inter-organizational collaboration and interpersonal networks in a cluster are crucial to productivity growth and risk investment.

Evidence from Junpu “Taobao” village demonstrated that government initiatives in upgrading logistics infrastructure, expanding investment capital, encouraging the sharing of information, and promoting best practices through partnership with

²⁴ Guo Guihang, Liang Qian, Luo Guangfan. (2014) *Effects of Clusters on China's E-Commerce: Evidence from the Junpu Taobao Village*, International Journal of Business and Management; Vol. 9, No. 6; p. 184.

businesses is crucial in improving the welfare of rural economies, especially in infant-industries.

Conclusion

Taobao villages are a powerful example of Porter's clusters and what are known as Marshallian externalities – where a group of companies cluster and the spill over of knowledge creates benefits for all.

This case study of Junpu Taobao village validates the relevance of Michael E. Porter's Diamond Model (even) for e-commerce, and supports the view that clustering of e-commerce vendors may be the right developmental pattern for China's e-commerce industry.

Perhaps the greatest contribution of Michael Porter's work has been to underscore the notion that national competitive advantage does not derive entirely from the store of natural resources that each country holds. Evidentially, an advanced factor to achieve national competitive advantage is the investment in people development.

Porter's Diamond Model implies that any country can create economic prosperity by systematically cultivating new, superior factor endowments (infrastructure, education, capital generation, etc.) initiated by the government and often in collaboration with the private sector, to develop high-value-adding industries that generate substantial wealth.

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A Qualitative Study to Explore Role of Networking for B2B Entrepreneurs in Emerging Country like India

Amber Sayal

Research Scholar, Indian Institute of Foreign Trade-IIFT
Deemed University under Ministry of Commerce & Industry-GOI
amber.sayal@rediffmail.com

Dr. Saikat Banerjee* (Corresponding Author)

Associate Professor, Indian Institute of Foreign Trade-IIFT
Deemed University under Ministry of Commerce & Industry-GOI
(saikat@iift.edu)

Abstract

Networking has been considered as an important ingredient for success of small and medium entrepreneurs. There is a strong synergy due to certain unique characteristics which make the match between entrepreneurs and network quite fitting. In fact the current research in entrepreneurial space is criticized for not being able to accommodate the impact of networking. This gap only gets magnified when we look at B2B entrepreneurs. In this background, this study thus attempts to take a step forward in this direction to explore role of networking for entrepreneurs in B2B space. Indian auto component industry is taken as context of study as the industry is dominated by small and medium entrepreneurs.

Retrospective key-informant methodology and narrative in-depth interviews are used. Based on exploration, we propose an entrepreneur network readiness framework and to suggest strategic networking practice roadmap to help entrepreneurs to chart their action plan based on their network readiness stage.

Introduction

Be it developed or a developing country, the impact of the performance of entrepreneurial firms representing small and medium enterprises (SMEs) on the fate of economic and social development in terms of providing productive employment and earning opportunities is well known (Katz *et al.*, 2000). Furthermore, such impact made by business-to-business (B2B) entrepreneurs has been well accepted (Robson and Bennett, 2000; Abouzeedan and Busler, 2004; Friedman and Sinuany-Stren, 1997; Zoetermeer, 2009). It is supported by Kristof (2002) who viewed that as political environment becomes more favorable and financial support more accessible, the B2B markets is being crowded by small and medium entrepreneurs. Thus it becomes imperative to explore ingredients of their successful performance from different perspectives. Among those, one such critical ingredient is networking. Those entrepreneurs depend a lot on networks due to their limited resources (Gilmore *et al.*, 2001). There is a strong synergy due to certain unique characteristics which make the match between entrepreneurs and network quite fitting. Innovativeness, personality and flexibility of structures and processes (Abimbola and Vallaster, 2007), speed of decision making and reactions,

and an eye for market opportunities (Krake, 2005), offer distinct advantages for those entrepreneurs looking for mustering external contacts.

Johannisson (1990) argues that the personal network of the entrepreneur is “the strategically most significant resource of the firm” (p. 41). Clearly, however, the value in the network is only realized through the owner-manager’s positive use of the resources contained within. This implies an interchange with members of the network through some form of networking activity. Furthermore, in a study of inter-firm alliances, Larson (1992) illustrated how entrepreneurial firms can gain competitive advantage by means of closely integrated networking arrangements with strategic customers and suppliers. Equally, Vesper (1980) notes that competitive advantage differs among parallel ventures (one of his four entry wedges) in terms of “personal qualities such as special resources of the entrepreneur or personal contacts or original ideas for ways to operate” (p. 193). This is further corroborated by Dubini and Aldrich (1991) and Johansson (1990). Indeed leveraging ones network is a key strategic activity (Szilagyi and Schweiger, 1984) and it is worth studying in terms of its connection with the overall strategy of the small and medium entrepreneurs (Govindarajan 1989; Gupta 1984; Gupta and Govindarajan 1984; Szilagyi and Schweiger 1984). Despite this fact, networking is one of the least researched area. In fact the current research in entrepreneurial space is criticized for not being able to accommodate the impact of networking (Aldrich and Zimmer, 1986; Granovetter, 1983, 1985). This gap only

gets magnified when we look at B2B entrepreneurs. The wide research gap is not due to limited scope of application of this concept. Indeed relationships and trust hold paramount importance in B2B entrepreneurship space to make key transactional decisions (Tsapi, 2005). Despite its potential value, to the best of our knowledge, academic research in this area is practically non-existent.

In this background, this study thus attempts to take a step forward in this direction to explore role of networking for entrepreneurs in B2B space. Based on exploration, objective is to propose an entrepreneur network readiness hierarchy and to suggest strategic networking roadmap to help entrepreneurs to chart their action plan based on their network readiness stage. Though there are many industries in B2B sector which can be considered for this study, we have zeroed down upon auto component sector of India for this study. There are numerous reasons for the same. Firstly, according to Grinder et al. (2010), single industry study is helpful if the industry offers a gorgeous field of exploration into the entrepreneurial practices. Auto component sector provides that rich scope of exploration into the core business practices and way networking comes into play. Especially from Indian perspective auto component sector is a core segment of the Indian economy. Though it has a relatively short history of development, but post liberalization there has been a strong increase in the number of players in the sector (Deshmukh *et al.*, 2007). Secondly, with the new governmental initiatives on ‘Make in India’ manufacturing initiatives this sector will play a major role in

shaping the manufacturing future of country. Thirdly, it is not just in future but even in present with many large domestic auto OEMs and good number of international players entering and expanding their footprints, India is fast developing as a robust automobile manufacturing base. Thus it makes exciting context to unearth the role of networking in operation of Indian auto component entrepreneurs and the same may be generalized for other entrepreneurship dominated industries.

Literature review:

Networking ingredients and its cross section with entrepreneurship

Networks are patterned relationships between individuals, groups, and organizations. It's like any other social skill that can be learned, involving making contacts, building relationships, and activating linkages (Grieco and Hosking 1987; Johannisson 1987). It is also defined as the management of relationships or alliances, which the individual has with others in their society (Dubini and Aldrich, 1991; Johannisson, 1986; Aldrich and Zimmer, 1986). From an organizational perspective, instead of looking at entities like individual, groups etc. in siloes, networking approach views strong linkages amongst them and thus view them in totality. Not just the entities are looked in totality, the dealings between the organizations and individuals no more remain transactional. Networking view goes beyond the transactional way of exploiting ones contacts. Though ultimately the result might be financial, ideally it leads to strengthening of trust which is the

backbone of running the business (Williamson, 1981). The accumulation of such “trustworthy” acts enables the parties to expand their relation and eventually engage in major transactions (Blau, 1964).

Thus, it would be appropriate to state that entrepreneurship is inherently a networking activity. If the entrepreneur rightly leverages his formal or informal connections which may be that of partners, suppliers, customers, venture capitalists, bankers, other creditors, distributors, trade associations, and family members across the firm’s boundaries, two major constraints are cut: time and money (Melin, 1987). One reason is mentioned by Aldrich *et al.* (1987) which states that once ability to garner crucial information will depend on diversity in one’s strong ties. If ones immediate network includes strongly linked people who have ties to very different parts of the social system, one may get information channels otherwise unavailable. Successful entrepreneurs are more likely, therefore, to be found in positions that are connected to lots of diverse information sources (Aldrich *et al.*, 1987).

Networking as an important entrepreneurial activity is widely acknowledged in the small entrepreneurship firms as well. Cromie (1994, pp 62), explains that the small firm owner-manager “relies heavily on the existence of a social and economic infrastructure and on the co-operation of many people ...”. He continues stating that for the small business (pp 65): “... success in developing new viable ideas and marshalling the resources to exploit them will depend to a large extent on the

information that entrepreneurs can garner. While some of this information can be retrieved from written reports, trade journals etc., most of it will arise from conversations with a large, diverse network of contacts who can keep the entrepreneur fully up to date on relevant issues.” This proves that the networking in which a small firm engages are not limited to pragmatic buyer-seller relations but potentially goes beyond to build trust and be a source of crucial information. In fact, at advanced stages such pro-activeness of the entrepreneur may inspire the company itself to become network-oriented by incorporating network concepts in its structure and operating mechanisms, perhaps by creating strategic alliances (Lorenzoni, 1983).

Thus the quality of networking an enterprise builds is unique to and dependent on the entrepreneur. Key determinants of such quality within an individual entrepreneur’s networking approach will include issues such as density, diversity, and reachability (Dubini and Aldrich, 1991; Granovetter, 1982). Other determinants of the strength of any network depend on the geographical, psychological, and cultural distances between the actors involved, the regularity of use of the relationship, its level of maturity, the degree of trust and the nature of past experiences between the “actors” in the network (McGowan and Rocks, 1995; Cromie et al., 1994; Johannisson, 1986).

Networking, marketing and branding perspective

The integral role which networking plays in the small and medium entrepreneurial firms is further strengthened and practically realized by the way it changes the way B2B entrepreneurs do branding and marketing of its products. Entrepreneurial firms anyways are not convinced with the traditional marketing theories. That the traditional marketing models, primarily based upon McCarthy's (1960) 4Ps typology, are having limited application is being resounded by many marketing academicians (Grönroos, 1994). Even empirical research has come out in support of the fact that marketing planning in practice is significantly different from prescriptions of marketing planning advocated in the literature (Greenley and Bayus, 1993). This has led to reluctance by practitioners to adopt these principles. This reluctance and theory practice gap has just to be amplified manifolds in order to imagine the situation of those entrepreneurs (Cohn and Lindberg, 1972; McNamara, 1972; Peterson, 1989; Brooksbank *et al.*, 1992; Liu, 1995). This does not mean that those entrepreneurs are not applying any marketing principles but just that the management of marketing variables is carried out differently in small and large firms (Dunn et al., 1987). It has to be different because of many distinguishing characteristics of the entrepreneurs. These varied characteristics has a definite impact in the way entrepreneurial firms are managed and they market their products or services. Some of the most commonly cited features of those firms include: resource constraints, especially time and finance (Davis et al., 1985; McKinnon, 1972); a "survival mentality" (Hankinson et al., 1997); and lack of strategic planning (Dodge and Robbins, 1992; Fuller, 1994).

The key, many academicians say, in decoding the ideal marketing planning lies in understanding the impact that social relations have upon the firm (Aldrich and Zimmer, 1986; Granovetter, 1983, 1985). The impact of entrepreneur utilizing his personal or extended networks on the firm's networking and product development was showcased by Falemo (1989). Indeed the entrepreneurs or firms which properly leverage networking are found having marketing differentiation strategy, product innovation strategy, market segmentation strategy and distribution strategy (Ostgaard and Birley, 1994). Thus the association of networking with marketing and innovation is also established by many.

It is not just marketing but the branding as well that networking is cited to be a key game changer. Recently, the role of networking in B2B entrepreneurial firms branding has also been highlighted. Relational view of branding says that a firm's competitive position emerges as the outcome of the interactions of network actors (i.e. stakeholders), and thus the brand performance is the result of complex web of actions and reactions (Ballantyne and Aitken, 2007; Brodie, Whittome, and Brush, 2009). Indeed, the stakeholder brand equity model proposed by Jones (2005) emphasizes not only branding through interactive relationships with various stakeholders, but also the interconnectedness of the relationships and, thus, their functioning as a network supporting or hindering the brand. Relationships with all stakeholders of the company might positively impact the brand image (Harris and de Chernatony, 2001; He and Balmer, 2006) or even sabotage the same (Wallace and de Chernatony, 2007). Some of the entrepreneurs are understanding this

sensitive linkage between networking and brand performance. They are thus forming cooperative relationships with decent channel members to improve legitimacy (Larson, 1992; Ojasalo *et al.*, 2008), to obtain information, to decrease risk, to promote the business (Gilmore *et al.*, 2006), and furthermore, to generate repeat business and positive WOM (O'Donnell, 2004). Many entrepreneurs even take help of outsiders like consultancies and advertising agencies to support their branding efforts (Inskip, 2004) as they lack sufficient branding knowledge and resources (Krake, 2005; Wong and Merrilees, 2005). Thus the influence networking practices can have on the entrepreneurial response, marketing and branding for B2B entrepreneurs is indicated by many. It would not be an understatement to say that networking is the life air of an SME starting from inception to maintenance and growth. However the consolidated view of networking in the said segment is missing.

Methodology

The research approach

Although networks in entrepreneurial firms as a research area have been gaining increased interest in recent years (Dodd, 1997), empirical studies have failed to provide consistent results. Such confusion has been attributed to the over-reliance on quantitative methods to investigate the subject of entrepreneurial firm networking and it being a very complex phenomenon (Curran *et al.*, 1993). Since identifying the role of networking is a complex and context-specific phenomenon

(Cooper, 1999; Shaw, 1999), it was viewed that qualitative methods would be appropriate to understand the extent of pervasiveness of networking (Bonoma, 1985; Halinen and Törnroos, 2005, Tsoukas, 1989). Accordingly, retrospective key-informant methodology and narrative in-depth interviews are used for three reasons. Firstly, knowledgeable key informants are able to inform on behavior while decreasing the cost of data gathering (Seidler, 1974, 817; Miller *et al.*, 1997). Secondly, Miller, Cardinal, and Glick (1997) show that using informants ready to report liberally on events of the recent past enhances the legitimacy of retrospective data. Thirdly, narratives provide a vital way to get close proximity of the interviewees and provoke their own view of reality (Polkinghorne, 2007) through real-life incidents and events that are hard to question (Jabri and Pounder, 2001). Narratives allow the interviewees themselves to evaluate the relevant information under the given subject and an opportunity to offer new insights into the phenomenon (Aarikka-Stenroos, 2010). Narratives also provide the potential to study managerial action, as they capture the dynamics of the context-specific phenomenon and can reflect process and change over time. The analysis of narratives was made using abductive inference (Strauss and Corbin, 1998) in the light of different themes (Joffe and Yardley, 2004), that were not explicitly predefined, but developed in the course of the research and that were influenced by such factors as prior theory, the purpose of the study and the empirical data itself (Riessman, 2008)

Context of study: Indian Auto Component Sector

With many large domestic auto OEMs and good number of international players entering and expanding their footprints, India is fast developing as a robust automobile manufacturing base. The latest report by India Brand Equity Foundation (2016) states that India is poised to emerge as global hub for auto component sourcing. In fact it is expected that Indian automotive component industry would grow to \$115 billion by 2020 with exports contributing around 25 percent at \$29 billion. Indeed the enterprises of Indian auto component industry would be playing major role in attainment of overall automotive industry's target as envisaged in the Vision 2020.

Thus with growing automobile sector and increased international participation in the same makes auto component industry an appropriate sector for this study. Most of the units in this sector are managed by small and medium entrepreneurs and are consequently dependent on other firms and institutions for their growth or even survival (Chaturvedi, 2003). While the importance of this sector from financial, social and economic is accepted undisputedly, the preparedness of the entrepreneurial firms in this sector appears somewhat scary. Dun & Bradstreet, India (D&B India) in its research study on auto component SMEs of India has brought out the identity crisis which these players face in the wake of mounting competition. It stated that only 35 percent of the companies sell their products under a brand name. Branding activities among proprietary and partnership firms are low at 5 and 9 percent, respectively. Over 55 percent of the enterprises with

brands have indicated exploring new markets, both in India and abroad. Around 31 percent of these enterprises are drawing up plans for undertaking innovative marketing initiatives and interestingly around 35 percent of the enterprises complained of marketing issues (Roy and Banerjee, 2012).

In India, Pune, Maharashtra's second largest city after Mumbai, has been a hub for the engineering industry for over five decades. Pune has developed into a strong automobile hub over the last several years. Auto giants like Mercedes Benz, Mahindra and Mahindra, Volkswagen have set up their manufacturing plants, besides facilities to make automobile components like Araymod, Ina bearing etc. The area also has developed a good ecosystem of vendors. This has earned Pune, title of being 'Detroit of India'. Nonetheless Pune is emerging a key global destination for major auto OEMs and thus thousands of auto component players are going to find their home here. Thus the region becomes a suitable setting for this study and samples have been selected from entrepreneurs operating in this area.

The sample description

Miles and Huberman (1994, p. 31) comments on describing sampling as the act of "taking a smaller chunk of a larger universe" and that "sampling is crucial for later analysis". It is essential to reflect on some of the key features of qualitative sampling before the sample is being looked at. First, qualitative researchers usually work with small samples of people nested in context. Second, qualitative samples

incline to be purposive instead of being random (Miles and Huberman, 1994; Morse, 1989). Third, samples in qualitative research may evolve once the field study begins and thus are not usually pre-specified. A small sample is considered typical of qualitative research (McDaniel and Gates, 1993). Gordon and Langmaid (1988) warn, however, that small samples cannot be regarded as providing information appropriate for the larger population at all times. For the purpose of this study we have interviewed owner managers of 12 entrepreneurial firms operating in auto component industry (Table 1: Sample Description).

	Respondent Code/Firm Role	Location	Business Type
	A Owner Manager	Pune	CI and SGI foundries
	B Owner Manager	Pune	Machine Shop
	C Owner Manager	Pune	Capital Equipment
	D Owner Manager	Pune	Bright Steel bars
	E Owner Manager	Pune	Sub-assemblies
	F Owner	Pune	Machine Components

	Manager		
	G Owner Manager	Pune	Equipment for consumables
	H Marketing Manager	Pune	Machine Tools
	I Marketing Head	Pune	Gears, Shafts and Assemblies
	J Technical Head	Pune	Turnkey solutions and Capital Equipment
	K Owner manager	Pune	Valves and Gear Pumps
	L Owner Manager	Pune	Plastic Joining Solutions

Table 1: Sample Description

As we were exploring the grounds in new area the discussion went more with the flow according to the interaction with the interviewees. Following questions were used for in-depth interview to unearth views of respondents:

- What have been your constraints in growing?
- How you have managed on different fronts in the constraints mentioned above?
- How you are handling competition?

- Specifically, how you have been investing your resources in marketing given the constrained environment?
- How has it impacted your marketing and branding endeavor?
- How you have leveraged your brand in fighting with the competition? Do you see a scope of networking to ensure improvement in this regard?
- How do you see the role of networking in your industry? How you plan to drive your company towards that?

Findings and Analysis

The aim of these interviews was to explore a highly pervading concept of networking in all the key areas of functioning of entrepreneurs of auto component industry. In first place we wanted to validate the applicability of traditional branding and marketing concepts in B2B entrepreneurial firms. As it has been indicated in literature that networking drives the way marketing endeavors are pursued by entrepreneurs, exploration of this fact is intended through this section of discussion.

Branding and marketing for entrepreneurs

In order to discover the linkage between networking and branding or networks being brand carriers as it comes out in literature, it was important to validate the branding beliefs of those sample respondents. That the branding is not relevant for

small and medium entrepreneurs of B2B auto component sector comes out quite clearly in the interactions with many of the respondents.

For instance, Respondent A said that:

“We are making commodities. So branding the product not possible.”

This was being corroborated by Respondent B states:

“With current set of suppliers branding not important; also the nature of products we produce are commodities...they don’t need branding...there is no effect of branding”.

This idea is getting generated from the fact that most of these suppliers are supplying to handful of the customers which may be couple of OEMs or very few large suppliers. Therefore their knowing them as the owner manager or the name of company is sufficient. Hence branding is not really needed. As Respondent E mentions:

“As such there is no brand...we are auto ancillary...we are not OEMs...we have to be known to OEMs only...that’s our brand... we deliver quality at price.”

The fact that branding is not restricted to the goods made and goes beyond to the corporate level in form of corporate branding is known to few, appreciated by fewer and applied rarely. As respondent B mentions:

“Corporate Branding...Have not thought about it but I have to build the brands----you cannot advertise anyways----real branding happens after usage of products”.

What comes out clearly in the conversation is the validation of the earlier proven facts in many studies that traditional branding theories are not appreciated by many

of the respondents. And it certainly is not a sensible idea to invest in branding if this status quo goes on for indefinite period of time i.e. known handful of customers keep giving certain business to those players. However this is where our interaction turned interesting when we questioned this status quo due to certain inevitable changes in the market environment. The two change agents were current challenges and future growth plans. This brings out the prominence of networking over traditional branding cum marketing practices deployed in general.

Challenges and growth plans

One of the most commonly cited challenges was the highly fluctuating demand of OEMs and consequent wavy journey full of uncertainty for these small and mid-size entrepreneurs. When asked about their current constraints in growing some of the following revelations made by few respondents on this front:

Respondent B: “Challenge if that volumes of OEMs keep fluctuating....Most of OEMs give huge order but once there is slump then foundries close down because you build capacity”

Respondent C: “Demand fluctuation in auto industry affects us”

Respondent I: “Shifted from purely OEMs to commercial vehicles, airline , agricultural etc. because competition pulling the margins down, technology disruptions, though volume has increased margins have drastically reduced and varying volumes and very erratic in cars”

Respondent J: “Due to ups and downs in auto industry, they are trying to diversify”

Another major change in the auto industry which is impacting the entrepreneurs is that OEMs are drastically reducing the number of suppliers to even 2-3 which are very large players and thus their interaction with the component players is coming to minimal. For instance Respondent J mentions:

“Trend is that we will not need more than 2-3 vendors...Due to automation, the vendor size has reduced...Everybody is liking a big size...Only niche and high value sales companies are existing in small size..”

Apart from the same, many respondents have objective growth plans. Like Respondent B views:

“We look forward to investments in backward integration and new products.”

Respondent C also says:

“Diversification is mainly to get more value. We plan to expand into aerospace industry as well”.

Respondent G mentions:

“In future we want to look beyond OEMs..we want to move into defense industry”.

Thus these two drivers of growing and responding to industry wide challenges necessitates the suppliers to diversify their customer base both within the sector and comparable industries.

In fact we can categorize our respondents in two broad categories based on their response to those changes. These are ‘proactive’ and ‘reactive’ entrepreneurs. Reactive entrepreneurs are those who spend a lot of time in ad-hoc management and are overloaded themselves with both strategy and day to day activities.

Consequently they are in survival mode and thus not willing to expand till these aforementioned drivers impact them on immediate basis. Interestingly enough their views on branding also adopt the bucket they belong which is reactive. We have already seen the understanding of branding and its application in the previous section. Most of them fall in this category.

Proactive ones are those who have managed the balance of their involvement in strategy and daily activities quite well. They have already incorporated these changes in their strategy and are looking out to expand their products or service lines and diversify constantly. They are of course like not many in the industry. Their views on branding are quite professional and thus their strategy and structure for marketing is also well laid out. For instance respondent C says:

“We have hired an external agency to do all designing of brochures, templates, internet presence, building case studies and external communication...Intention is to have standardized and focused communication. We have seen that when we were not doing communication through all channels we were perceived to be smaller”

Similarly, respondent J mentions:

“We have brochures, company uniform, purposes and core values card...last three years we were working on this...without doing this one it becomes a personal company.....we have given different types of authority given to people....anybody can know our company without owner getting involved in the same...there is

marking on nameplate branding on machines etc.we grab the business by using brand of our company.”

However to bring the unique variable out we helped our reactive respondents to go in short term future in wake of the challenges which are dawning upon and thus discussed to understand their response. This will bring them to the level of proactive players, at least theoretically. The sum and substance is that inevitable changes in the industry is going to force these small players not to stay in their comfortable zone of fixed customers and their fixed requirements. This means there has to be some active marketing and branding strategy suitable to its size. Inevitably the entrepreneurs are forced to embrace these concepts and following section highlights the role networking plays in this scenario.

Customer acquisition and customer relationship management

One common method to acquire new customers by some of these players are cold calls. Respondent A explains:

“We acquire new customers by cold calls, warm calls, lead generation...as such I am currently multi-tasking but plan to have dedicated marketing department in future.”

Respondent E and F also mention:

“We approach directly.”; “We do cold calls, observing the customer site.”

In some cases there is a well-established marketing department doing the same and in others the owner manager is himself involved. However, one strongest common

factor which came out in both proactive and reactive entrepreneurs is their reliance on their formal and informal networks. As Respondent C puts the crux of it succinctly:

“Knowing maximum people is key to get leads and converting them. You need to know the person whom we wish to meet. Key is to get to know more and more people.”

However the maturity of these players in leveraging these networks were again different based on the category they belonged to viz. Proactive and Reactive. Nonetheless almost all the entrepreneurs have relied upon their networks to give meaningful close to their marketing efforts. As respondent E mentions:

“We have leveraged network of people who has been working in customer organizations and they move on to join the new customers and thus get us some inroads.”

Respondent G has a coherent message:

“People whom we are in touch with him, they change companies and spread their word of mouth. Word of mouth is the only way.”

Respondent K says:

“We keep in good touch with top level staff of our customer organization...top level staff of large companies they go on moving from one company to other...They spread the word.”

Irrespective of size of the company leveraging ones contacts is one of the most used ways to acquire new customers, not just domestically but internationally as

well. As Respondent I who is mid-size player with established marketing department admits:

“We acquire international players through our marketing force...however we also get it through personal references/contacts in those players.”

Network management

However it was interesting to see that some of these players have taken this apparently obvious type of networking to the next level and linked it to the way the organization works. We want to cite the response of Respondent J who says that:

“We have been maintaining relation with people in customer organization who kept moving...actually this culture starts with our MD... he still has contacts of the people whom he met with in 1982...he remembers people and what are their needs and whenever anything is manufactured related to that line of customer: they will get notified, informed... he attends and invites everyone on all the informal family functions...then now he has handed over this culture to the marketing department.”

What comes out clearly is that instead of reactively taking networking as a marketing tool, proactive entrepreneurs live the culture of networking. Instead of approaching people in one's own need, proactive entrepreneurs remembers the need of everyone and learns to give benefit and gain to the stakeholders in the network. Respondent J continues:

“We have given customer specific calling targets to marketing department... one week, two weeks, one month...and then we heavily use customer

references...project team interacts with customers. Certification at the end of engagement done by customer...our appraisal system of customer facing teams like sales and service/project team is based on the customer reviews...that's how we instill that culture.”

Another way in which practitioners leverage their personal network is that a group of people in related sectors, particularly friends and acquaintances, come together to make some group to share the best practices and trends. As respondent G mentions:

“ We have friends networking through Email and *whatsapp* groups, phone, basically an informal group of about 10 experts from Hydraulics, material handling etc.. we keep sharing best practices and trends...this helps us a lot in tailoring our products and services to the market needs..”

Thus we see that as brought out in literature networking thus germinates the seed of innovation as well. This brings us to the matured understanding and approach to convert simple tactic of personal contact networking to an organization wide format of customer centricity and innovation in small size environment.

Entrepreneur Network Readiness Hierarchy

Thus we see that from the most naive and reactive form of leveraging ones contacts we have few examples who have made it an organization wide approach. The birth of this of course happens in the womb of high entrepreneurial spirit. Based on your exploration, we have thus come out with an ‘Entrepreneur network



readiness framework' for this kind of networking. As shown in Figure 1 there are four stages to it.

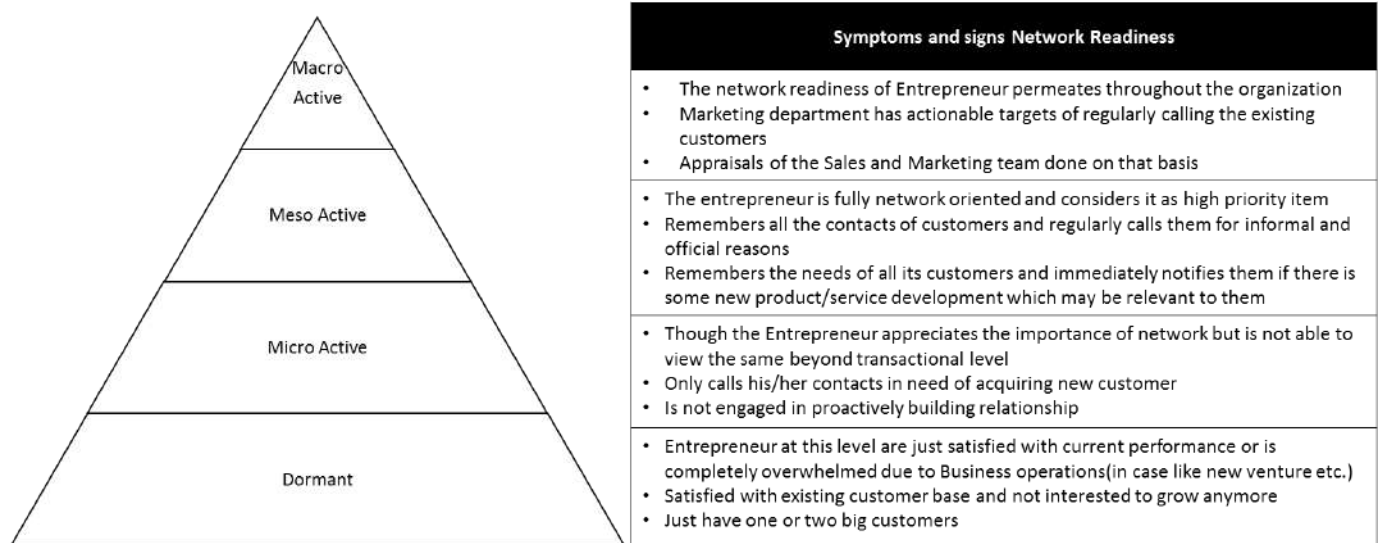


Figure 1: Entrepreneur Network Readiness Hierarchy

Dormant State: The lowest readiness level is where the entrepreneur is satisfied with current customer base and is not willing to grow further. This is generally observed due to insufficient growth appetite, lack of risk taking ability to expand the infrastructure or long term relations with the customers which give them the comfort level for future. Typically this set of entrepreneurs are in maintenance mode and are not too passionate about conducting business. This complacency is observed when entrepreneur is not seeing any future heir for the business, lack of family support or achievement of her objectives. Another class of entrepreneur falling at this level are those who have very recently started their venture and they just have adequate number of customers which they can cater at this stage of their

business. They are trying to gain ground in business and settling down with their human and other resources.

Micro Active Centricity: Next level is where the entrepreneur believes in the potential of network but the view towards the network is still grounded at transactional level. At this level entrepreneur is reactive to the changes happening in market and thus leverages his network only when there is need to acquire customers. The aspect of proactive relation building is missing and ones objective to leverage the network is purely financial gains. Typically this set of entrepreneurs are pre occupied with adhoc matters of businesses and are not able to spare time developing strategic outlook for their venture. They also sometimes do not have clear growth objectives for mid to long term. It is also observed that such Entrepreneurs are not having an impressive performance track record in recent past.

Meso Active Centricity: Level above Reactive approach is that of an ‘Active’ entrepreneur. Here the entrepreneur is very motivated to grow and proactive to exploit all possible opportunities to acquire new customers and improve services to existing customers. Here the entrepreneur has put in place a structure in the organization with clear responsibilities and he is primarily looking for expansion opportunities and customer relationship management. It has been observed that such entrepreneurs revere the role of their personal network very highly in the success of their business. They not only remember their personal contacts but also their specific needs. They always update the customers on any new development in

their product/service line and connect the developments to their respective relevant needs. Though they focus on customer but they also ensure that quality of products is of extreme high quality by continuously educating their operations team of customers' needs and importance in being customer centric. Indeed this process of outside-in approach when practiced for a long period of time leads to the highest maturity level.

Macro Active Centricity: The highest readiness level is one where entrepreneur is able to instill the culture of personal contact networking in the organization as a whole. The mood and emphasis of the owner is fully understood and appreciated by the organization and in particular by those employees who face customers. This then translates into formal appraisal of the employees done based on their feedback from customers. The typical items in their appraisal apart from customer feedback is the number of times they had called their key customers, customer retention performance etc.

Strategic Networking Roadmap

After exploring entrepreneur network readiness we have further tried to investigate the way entrepreneurs are practicing networking in real world. One major form of networking which is being leveraged by many of the respondents is in more formal setting such as participation in professional forums viz. exhibitions, trade fairs etc. As respondent C mentions:

“Knowing maximum people is key to get leads and converting them. You need to know the person whom we wish to meet. This is done mainly through exhibitions

and then following up through e-mailers etc. E-mailers about new machines and case studies... Research done about all the players in particular product type and share the case studies. This builds trust...News letters on monthly basis.”

Participation in relevant associations, trade fairs, exhibitions etc. is adopted by a good number of respondents, however degree of engagement and thereby leveraging the same is varying in this cohort. As respondent B says:

“We are part of only Maratha Chamber of Commerce of Industry and Agriculture...but not very active.”

Respondent H also highlights the benefits by stating:

“We are part of Society of Indian Automobile Manufacturers...it helps because they keep on sharing trends and we do get networking benefits...apart from it we participate regularly in National and International exhibitions...it helps a lot.”

Respondent I also concedes the benefits of participation in exhibitions and fairs especially for international customers. As the respondent mentions:

“We participate in international exhibitions for acquiring international customers...not the national ones. International customers are acquired by participation in exhibitions and then marketing department follows up with the same.”

Based on these varied responses we have captured strategic networking practices by entrepreneurs based on their network readiness level.

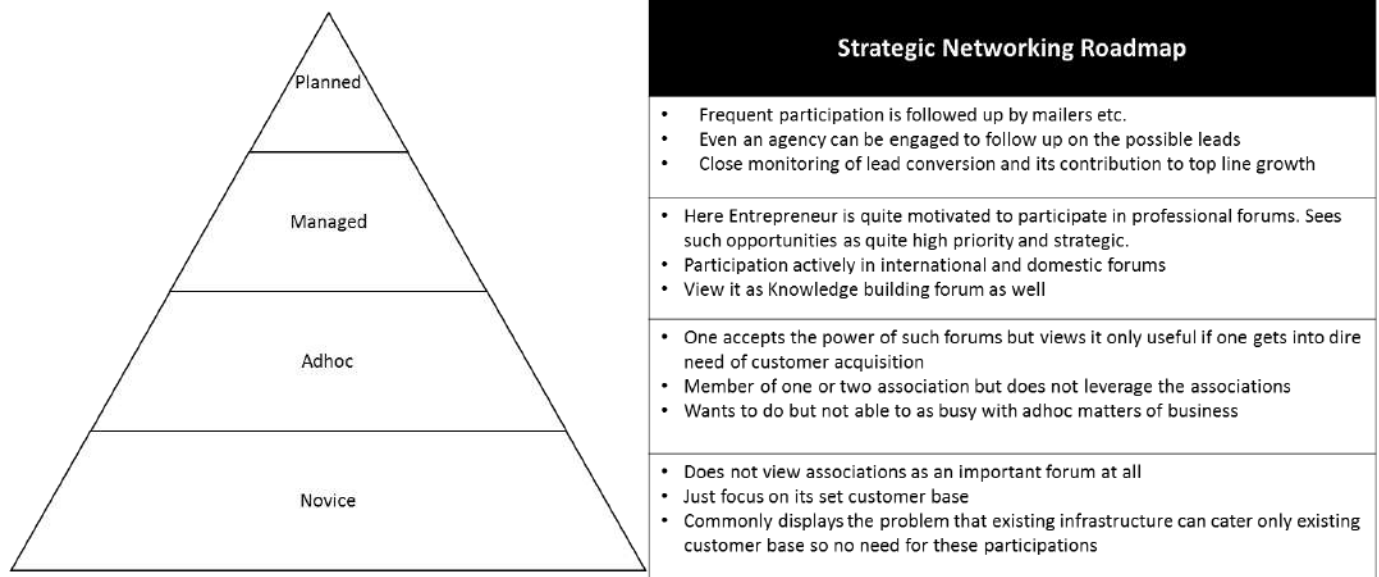


Figure 2: Strategic Networking Roadmap

We propose four broad types of actionable strategic networking which organizations may practice based on their network readiness stage. In stage 1, which we term as Novice, entrepreneurs refrain themselves from any professional networking. For instance there are respondents who are not part of any association nor do they participate in any exhibition or fairs. Typical features of respondents in this category are that they do not view being part of associations and participating in exhibitions or fairs at all useful. They either have a very fixed base of customers or belong to class of being reactive entrepreneur. Classic representative response is that of Respondent E which states:

“We are not part of any associations.”

On commenting on customer acquisition it is being mentioned:

“We approach them directly. If they need us...They have a look at our plant...anyways our investments cannot be increased...so we do not go to new customers...existing facility can only cater to existing customers.”

Entrepreneurs which fall in readiness stage 2 or Adhoc level are part of associations and very rarely participate in some forums. However the membership and participation is not leveraged properly. Though the appreciation of this way of networking is present, sufficient drive from entrepreneur is missing. It may be because of his over engagement in day to day business affairs or it may be again driven by lack of growth from current levels. Respondent B is one of the typical representation of this level.

“I understand that word of mouth and networking is important but not any active networking leveraged as of now”, he mentions on professional networking.

When asked about how much time he is able to spend exclusively for strategy building etc. it is mentioned that:

“Unfortunately time spent on ad-hoc matters is very high...Too much time is spent on shop floor”.

Respondents in readiness stage 3 are active in leveraging of networks through these professional forums. Here the respondent owner manager not only actively participates for customer acquisition and growth but also starts viewing it as a knowledge building forum as well. Therefore we call this stage as ‘Managed’ as the owner manager is able to well manage the potential benefits of such networking. This is in line with the literature about the ideal application of

networking which should not be viewed for transactional scope but innovation purposes as well. This needs strong will and appreciation of networking from the owner manager which were missing in previous two levels. As Respondent C says, “We regularly engage with Indian Machine tool Association to do some courses...Courses done to help us increase in accuracy organized by Indian Machine tool Association.”

Respondent H also shares:

“We are part of SIAM...apart from exhibitions there is one more benefit... they keep on sharing trends. It helps us a lot in developing new product and service lines.”

For entrepreneurs in stage no 4, networking endeavor takes a more organized shape and becomes the core integral part of functioning in organization. Here not only owner manager is highly motivated to draw necessary knowledge from such professional networks but the action on that knowledge is highly organized. It may be led by the organization and not the entrepreneur alone. Also we see that players at this level may take help of some specialized skills of small marketing agencies considering their limited expertise. This level of sophistication makes this level called as ‘Planned’. Respondent C has been a best in class amongst the lot. In his words:

“We try to know more and more people by participating in exhibitions and being part of associations...then we follow it up...we have hired an external

agency...they send mailers...and they also make corporate presentations, templates, standardized communication...we have mandated them for this job.”

Another feature of this stage is the clarity of benefits in terms of growth, performance etc. by leveraging such networks. As Respondent C mentions:

“This endeavor has helped us improve by 20% in terms of sales.”

Thus, it may be seen that in an ideally desirable scenario, entrepreneurs, based on their readiness stage, may leverage advantage of networks to get the maximum performance benefits.

Conclusion

We see that when it comes to either of the forms of networking, the degree of adoption is fully reliant on the perception of entrepreneur. If the entrepreneur is adequately motivated then that translates into some organization changes in terms of the structure or culture. This goes well with the literature which has been outlined earlier. Also networking as an active approach being consciously and unconsciously used by the entrepreneurs for their branding and marketing effort also comes out clearly. What differs various entrepreneurs in consciously doing so is dependent on their readiness stages. Indeed the networking approach goes beyond the transaction financial tactic is also validated. With some entrepreneurs using their networks for sharing trends and thus showcasing this thought leadership to their customers or consume it to do new product development is also highlighted by few. To conclude the analysis resounds with the global mood of the key role

networking plays in the functioning of a B2B entrepreneurs in an emerging economy set up.

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From “Incremental” To “Evolutionary” Recovery Pathways: Firm-Level Entrepreneurial Intensity

Mammy M. Helou
Macquarie University, Sydney, Australia
marym.helou@outlook.com

ABSTRACT

The purpose of the current study is to examine how a firm’s level of entrepreneurial attitudes and behavior influences the nature and speed of its recovery, given high levels of uncertainty and turbulence. This study is of four sections. First, a discussion of the Contingency Recovery Typology (Helou, 1995; 2017) is presented. Secondly, this study provides a discussion of the conceptual entrepreneurial behaviour continuum and the firm-level entrepreneurial intensity (Barringer and Bluedorn, 1999). Thirdly, the firm-level entrepreneurial intensity analysis is then applied to the four contingent corporate recovery pathways to investigate the nature of the firm’s emergent contingent recovery path. Finally, the conclusion presents the theoretical and practical managerial implications, and provides directions for future research.

INTRODUCTION

The need for emergency response in reaction to high risk and uncertainty is rather complex, and is becoming a commanding issue nowadays, as organizations find themselves in positions requiring them to deal with situations that have not been previously experienced or forecasted (Anderson et al., 2008). Herbane et al. (2004) argue that businesses are promptly responding to the increased environmental threats in an attempt to counter the possible drastic effects of possible crises. Nevertheless, the question remains as to whether such responses are gaining consideration at the strategic level, as opposed to merely the functional level. The findings of previous research show that corporate entrepreneurship is positively related to environmental turbulence (Kouzman and Jarman, 1989; Naman and Slevin, 1993), and environmental complexity (Kouzman and Jarman, 1989; Zahra, 1991).

It was the economist Joseph Schumpeter (1936) that commenced entrepreneurial research, with his argument that the entrepreneur is the catalyst of economic activity, who continuously introduces innovative products, enhanced process utility and novel systems of production that leads to enhanced buyer interest, as such, improve economic growth. Even though Schumpeter (1936) concentrated his writings on the individual entrepreneur, Barringer and Bluedorn (1999) state that similar observations of entrepreneurship have been conceptualized at the firm level, with the underlying assumption being a behavioural phenomenon,

where firms fall on a conceptual continuum ranging from highly “conservative” (low corporate entrepreneurship intensity), to highly “entrepreneurial” (high corporate entrepreneurship intensity). They further explain that entrepreneurial firms are characterised by being innovative, proactive and risk-takers, while conservative firms are more reactive, less innovative and risk-averse. They referred to the position of the firm on the continuum as its “entrepreneurial intensity”.

A comprehensive literature review indicates that there has not been a single study that specially focused on the relationship between corporate entrepreneurial attitudes and behaviors, on the one hand, and the temporal nature of the firm’s recovery process given decline under uncertainty, in general, and its emergent recovery pathway, in particular. The purpose of the current research study is to examine how a firm’s entrepreneurial behavior influences the nature and speed of its recovery, given high levels of uncertainty and turbulent environments. The approach taken in the current research study is to explore the relationship between the dimensions of the firm’s corporate entrepreneurship intensity and the firm’s transpiring contingent corporate recovery pathway. To achieve this objective, the current research builds on two main studies, namely: The Contingency Recovery Typology (Helou, 1995; 2017), and the Firm-Level Entrepreneurial Intensity (Barringer and Bluedorn, 1999).

To this end, this research is four-fold. First, it provides a discussion of the Contingency Recovery Typology (Helou, 2017), with an analysis of the four

interrelated stages of recovery, and associated contingent recovery pathways. Secondly, the current study presents a discussion of the conceptual entrepreneurial behaviour continuum and the firm-level entrepreneurial intensity (Barringer and Bluedorn, 1999). This section further includes an evaluation of the contributions and limitations of the above mentioned two studies.

Thirdly, the findings of Barringer and Bluedorn's (1999) research in relation to the firm's level of entrepreneurial intensity - being the position of the firm on the conceptual entrepreneurial behaviour continuum, as it ranges from highly conservative to highly entrepreneurial – is then applied to the emerging four contingent corporate recovery pathways, as determined by the Contingency Recovery Typology (Helou, 1995; 2017), to explore the nature and position of the firm's emergent contingent recovery path – as it lies on a conceptual recovery pathway continuum ranging from highly *evolutionary* to highly *incremental*. “Evolutionary” recovery pathways are shorter, direct, and cost effective, as recovery plans and strategies are implemented in only two recovery states (Path IV); where incrementally recovery pathways are longer, indirect and costly, as recovery plans and strategies are implemented in at least three to four recovery states (Path I, Path II, & Path III). For ease of discussion, the polar ends of the recovery pathway continuum are referred to as “evolutionary” (direct, low cost and high-speed recovery path, stretching from State I: “Jumbled” State directly to State IV: “Routinization and Stability”); and “incremental” (indirect, high cost and low-speed recovery path, passing through at least three or all four recovery states:

“Jumbled”, “Experiential”, “Transitional” and “Routinization and Stability”). This section also features an analytical evaluation of the temporal properties and determinants of the developmental phases and recovery pathways, and provides a discussion of the impact of the of the firm’s level of corporate intensity on the nature of the recovery path undertaken, and the overall texture of the recovery process. Finally, the conclusion presents the theoretical and practical managerial implications, and provides directions of future research.

THEORETICAL BACKGROUND

The current research study builds on the following two main studies: The Contingency Recovery Typology (Helou, 1995; 2017), and the firm-level entrepreneurial intensity (Barringer and Bluedorn, 1999). This section provides a brief exploration of each of these studies, followed by a discussion of their contributions, limitations and application.

CONTINGENCY RECOVERY TYPOLOGY: FOUR CONTINGENT RECOVERY PATHWAYS

As per Table 1, when juxtaposing the contingent decision-making contexts schema (Jarman and Kouzmin, 1990; Kouzmin and Jarman, 1989) to the elements of the Crisis, Breakdown and Re-equilibration Model (Linz and Stephan, 1978), the decision-making contexts of Algorithm, Opportunity-Cost, Muddling Through and Crisis, correspond to the elements of the Crisis, Breakdown and Re-equilibration Model, namely, Stability, Efficacy; Effectiveness and Instability.

Table 1: Decision-Making Contexts, Crisis, Breakdown and Re-equilibration Elements

Decision-Making Contexts			Crisis, Breakdown and Re-equilibration Elements
1	Algorithm	-	Stability
2	Opportunity-Cost	-	Efficacy
3	Muddling Through	-	Effectiveness
4	Crisis	-	Instability

This provides a significant analytical tool to assess four corporate evolutionary stages of recovery and development (Stage I: *Jumbled* State, Stage II: *Experimental* State, Stage III: *Transitional* State, Stage IV: *Routinization*). The four subsequent developmental stages are featured in Table 2 below. Accordingly, the Contingency Recovery Typology outlines four different pathways to progress from a “Jumbled” recovery to a “Routine” recovery contexts. Creative and innovative recovery strategies are needed to move the organization out of the “Jumbled” phase and into the “Routine” Phase (Kouzman and Jarman, 1989),

otherwise the organization might find itself absorbed in a “Jumbled” state. As the organization moves out of the jumbled state, and in the direction of the new algorithmic state, the complexity of decision making gradually decreases, and the level of risk and environmental uncertainty incrementally drops. Furthermore, four recovery paths emerge, each commencing with the first contingent class, namely, the “Jumbled” phase, and ending with the fourth contingent class, namely, “Routinization”, with different paths in between that can be traced for events to end up in a new algorithm. Even though these recovery phases are interrelated, each of them holds different properties, as follows:

- **Stage I - *Jumbled* State:** This embodies the first recovery phase, which is characterised by a high level of risk and uncertainty, since the firm has just emerged out of a crisis situation. During this stage, the firm is struggling with the implementation of recovery activities given a “crisis” decision making context, and an “unstable” environmental state (Table 2).
- **Stage II – *Experimental* State:** During this phase, the firm attempts to implement recovery strategies given a “muddling through” decision making context, and an “effective” environmental state. Since the firm is muddling through, it is in need of generating and implementing recovery policies geared towards the realization of the reform forces needed to attain recovery (Table 2).
- **Stage III – *Transitional* State:** This is the third recovery state. In this stage, the organization attempts to implement recovery strategies given an “opportunity cost” decision making context, and an “efficacious” environmental state (Table 2).

It signifies a new order categorized by short-term stability, where a major challenge for the firm is to develop suitable resolutions to pertinent developmental complications. As such, comprehensive feasibility studies and cost-benefit analyses of alternate recovery strategies are generated (Table 2).

- **Stage IV – *Routinization* and *Stability*:** This denotes the final state. In this stage, the firm continues to undertake recovery activities given an “algorithmic” decision making context, and a relatively “stable” environment (Table 2). This stage represents an excellent position for management to evaluate corporate recovery and developmental forces, and identify an optimal cost-effective means of attaining them. In comparison to Stage I, the level of uncertainty, urgency and threat experienced by the firm has decreased (Rosenthal, 1986). The attainment of long-term stability is determined by the firm’s realization of the much-needed reform forces (Table 2).

Table 2: Contingent Recovery and Development Stages

Decision-Making Recovery Contexts		Crisis, Breakdown & Re-equilibration Elements		
	Contexts			
Phase I	Crisis	+	Instability	=
Jumbled Phase				
Phase II	Muddling Through	+	Effectiveness	=

Experimental Phase

Phase III Opportunity Cost + Efficacy =

Transitional Phase

Phase IV Algorithm + Stability =

Routinisation

The nature of the above mentioned four recovery stages, being either “evolutionary” or “incremental”, is determined by the degree of flexibility and effectiveness of the firm’s entrepreneurial-leadership attitudes and functions practised, and the recovery path assumed. Recovery strategies should aim at maximizing recovery activities, and minimizing recovery time (Sahebjamnia, Torabi and Mansouri, 2015). The ability to gradually achieve this is determined by the gravity and the pace for which recovery forces are being realized by the firm, which, in turn, is once again reliant on the style and nature of the firm’s entrepreneurial-leadership behaviour in practice.

PHASE IV Routinization and Stability	PHASE II Experimental State
PHASE III Transitional State	PHASE I Jumbled State

As the firm cruises on a recovery mode, it shifts away from Phase I (*Jumbled Phase*) in the direction of Phase IV (*Routinization and Stability*). Meanwhile, there are other recovery pathways that the firm may choose to adopt. This study evaluates four recovery pathways, all of which commence at Phase I and end in Phase IV, while conceivably transiting through Stage II, or Stage III, or both, as follows:

- **Path I:** This signifies the longest recovery path, where recovery plans are gradually implemented at every recovery phase. It transits through the four recovery phases, commencing with the jumbled phase, and concluding in the routine and stable phase, as follows: It starts at the “Jumbled” stage, shifts to the “Experimental” stage, passes by the “Transitional” stage, and concludes in “Routinization and Stability” (Path I: 1,2,3,4) (Figure 1).
- **Path II:** This also denotes a long recovery path, yet shorter than Path I, where recovery plans are gradually implemented over three of the recovery phases. It transits through three recovery phases, commencing with the jumbled phase, and concluding in a routine and stable phase, as follows: It starts with the “Jumbled” phase, transits to the “Experimental” state, and concludes in “Routinization and Stability” (Path II: 1, 2, 4) (Figure 1).
- **Path III:** This is also a long recovery path. It is shorter than Path I, where recovery plans are gradually implemented over three of the four phases. It transits

through three recovery phases, commencing with the jumbled phase, and concluding in a routine and stable phase, as follows: It starts at the “Jumbled” phase, transits to the “Transitional” phase, and concludes in “Routinization and Stability” (Path III: 1, 3, 4) (Figure 1).

- **Path IV:** This depicts an *evolutionary* recovery pathway. It is the shortest and conceivably the most cost effective path. Recovery plans are implemented in only two recovery phases, commencing at the jumbled phase, and concluding in a routine and stable state, as follows: It starts at the “Jumbled” state, and concludes in “Routinization and Stability” (Path IV: 1,4) (Figure 1).

Recovery challenges may emerge at each and every state. Organizational capability to board on a recovery mode, whilst endeavoring to gradually overcome developing recovery challenges, is determined by the adaptability and efficiency of the firm’s entrepreneurial-leadership intensity and governance patterns practised. Accordingly, the corporate recovery route adopted is dependent on the attainment of the following:

- Organizational capacity to formulate an innovative and optimal recovery strategy;
- The firm’s capability to effectively implement set recovery strategies within the allocated time and budget; and
- The intensity and effectiveness of the firm’s entrepreneurial-governance patterns practised in attaining the recovery requisites needed, and adapting to environmental changes.

Regardless of the degree of the firm's readiness to the prospect of emergent risks, momentous surprises may surface (Helou, 1995). This requires constant appraisal and assessment of preceding contingent strategies in light of probable new challenges (Dror, 1988). When considering the contingent stages of organizational recovery, post-turbulence situational entrepreneurial-leadership patterns, adopted whilst managing the progression of the firm's recovery path, can be identified. The Contingency Recovery Typology argues for a temporal and adaptive entrepreneurial-leadership paradigm, which permits leaders in charge to transit among alternate entrepreneurial-leadership functions, patterns and strategies (for example, authoritarian to participatory, and vice versa), as needed throughout the recovery and post-crisis periods.

Every crisis situation is unique, as such the need for situation-specific temporal governance emergency response strategies (Rosenthal, 1986). Nevertheless, developing an understanding of the entrepreneurial-leadership intensity and associated governance patterns practised during past recovery situations, assist in developing future recovery response plans and activities. Recovery hurdles arise if the firm fails to identify and effectively implement the recovery strategies needed, thus, deterring the realization of crucial recovery requisites. In such cases, the firm may get absorbed in long-term turbulent and uncertain environmental states, thus, prolonging its duration at the "Jumbled" stage (Phase I). With augmented decline, recovery may become unachievable, or even unsolicited.

FIRM-LEVEL ENTREPRENEURIAL INTENSITY

Corporate entrepreneurship, in terms of both attitudes and behaviour, represents a major organizational process that impacts organizational performance and survival under competitive environments (Lumpkin and Dess, 1996). In a study encompassing 169 U.S. manufacturing firms, employed to explore the impact of a firm's strategic management practices on its corporate entrepreneurial intensity (attitudes and behaviours), Barringer and Bluedorn (1999) selected five strategic management dimensions to study their potential influence on one or more of the key firm-level entrepreneurial behaviour enablers, namely, opportunity recognition, organizational flexibility, and a firm's ability to measure, encourage, and reward innovative and risk-taking behaviour.

The five strategic management dimensions selected are: The scanning intensity (degree of rigor of the managerial activity aimed at uncertainty absorption given the trends and events in the firm's environment), planning flexibility (adaptability of strategic plans with the identification of environmental opportunities and threats), planning horizon (length of the future time period that decision makers consider in planning), locus of planning (level of employee involvement in the firm's strategic planning process), and control attributes (a control system in place ensuring that business strategies meet predetermined goals and objectives, i.e., the control systems of entrepreneurial organizations must encourage innovation, proactiveness and risk-taking. While financial controls base performance on financial criteria, strategic controls base performance on strategic relevant criteria).

In this study, the information on environmental turbulence and environmental complexity was collected via a self-report survey.

The authors explain that high corporate entrepreneurial process is congruent with high level of environmental scanning intensity, aimed at detecting market shifts that present opportunities for totally new or new and improved goods and services, and enable the risk-taking and proactive dimensions of entrepreneurial behaviour; high levels of planning flexibility aimed at changing set strategies as need arises; a short-term planning horizon (less than 5 years) to facilitate a speedy recognition of environmental change, and develop appropriate goods and service innovations; deep locus of planning that facilitates the consideration of good ideas from all levels of management; a well-designed strategic control system that is capable of rewarding employees on product or process innovations that take a longer time to reach the market; and a less rigorous financial control system.

In contrast, the authors further explain that conservative firms usually experience more stable environments, characterized by low levels of uncertainty, with goods and services having longer life cycles, as such, undertake low levels of environmental scanning with low degrees of innovativeness, and longer planning horizons; limited planning flexibility; long-term planning horizon (more than 5 years), as these firms tend to operate in a stable and predictable environments; shallow locus of planning that limits planning to only top management, as deep employee participation in planning is not needed, and is expensive in terms of time and energy; less strategic control system which is costly in terms of managerial

time and effort; a well-designed financial control system which introduces a high degree of discipline into the control process, and a less strategic control system given its cost in terms of managerial time and effort.

CONTRIBUTIONS AND LIMITATIONS

This section discusses the contributions and limitations of the above two research studies. The Contingency Recovery Typology represents a holistic, contingent and “heuristic” approach to corporate recovery policy planning. The application of such an approach, as opposed to one dictated by purely short-term economic forces, explains the reason why some organizations are able to timely emerge from chaos, while others seem to submerge in on-going turbulence. It represents a dynamic tool to be employed by academics, organizational leaders and policy decision-makers, for the analysis of the corporate recovery process, and the development of effective recovery plans and strategies, at each and every stage throughout the recovery process. It is situation specific, as such, relevant to various levels of analysis. In other words, it is applicable to nations, states and organizations.

A main limitation of the Contingency Recovery Typology (Helou, 1995; 2017) is that it does not provide for the dynamic nature of stage I, the “Jumbled” State. That is, it does not allow for the time-sensitivities inherent in the jumbled stage. Beyond a certain degree of decline, the organization may find itself rather hooked and unable to progress from Stage I: “Jumbled” State. At this stage, moving on to

the next recovery phase becomes either extremely difficult, or even impossible. Another main limitation of the Contingency Recovery Typology (Helou, 1995; 2017) is that it fails to specify the entrepreneurial-leadership intensity determinants impacting the nature and speed of recovery, and, thus, the nature of the firm's emergent recovery path experienced, being either gradual and "incremental" or "evolutionary". In other words, the above-mentioned typology fails to identify the entrepreneurial-leadership functions and behaviours needed to facilitate and speed up the firm's recovery efforts.

Barringer and Bluedorn's (1999) research study contributes in presenting the relationship between the five selected strategic management practices mentioned above and the firm-level entrepreneurship intensity. Nevertheless, it also has few flaws as well. First, as Barringer and Bluedorn (1999) explain, less mature streams of literature bases are available to support the validity of two of the strategic management practices selected, namely, planning flexibility and locus of planning. Secondly, the control variables considered included environmental turbulence, environmental complexity, firm size, debt level and current ratio. A change in one or more of these variables may impact on the attained results. Thirdly, the analysis is confined to only five strategic management practices and the level of corporate entrepreneurship intensity. Finally, the analysis is also limited to only manufacturing firms.

Nevertheless, applying the firm-level entrepreneurial intensity, via the conceptual entrepreneurial behaviour continuum (Barringer and Bluedorn, 1999),

to the four contingent recovery pathways (Helou, 1995; 2017), would facilitate organizational understanding of the entrepreneurial attitudes and behaviours required to facilitate organizational recovery given decline. Accordingly, it would further assist in developing a deeper understanding of the nature and speed of firms' recovery processes, and the position of the contingent recovery path on the Recovery Pathway Continuum. As such, organizations would then be able to match their entrepreneurial attitudes and behaviours with their allocated temporal and budgetary recovery objectives.

ENTREPRENEURIAL-RECOVERY PATH ANALYSIS

Organizational attainment of the requirements for contingency-related analysis of recovery pathways needed to be able to adapt to crucial changes in the decision-making contexts and environmental states, is highly dependent on the displayed corporate leadership skills and training (Kouzes and Posner, 1993), and the level of corporate entrepreneurial intensity (Barringer and Bluedorn, 1999). For example, the research outcome of Barringer and Bluedorn (1999) indicate that a firm with high corporate entrepreneurial intensity is continuously innovative, and undertakes extensive environmental scanning to identify and exploit environmental change in an attempt to remain competitive. A firm experiencing a turbulent environment is in need of extensive environmental scanning, short planning horizons, and a flexible planning system, to identify and implement innovative and relevant recovery requisites. This supports previous research findings (Rosenthal,

1986), in that firms facing turbulent environments are found to be more innovative, proactive and risk-takers (Naman and Slevin, 1993).

Four out of the six hypotheses tested by Barringer and Bluedorn (1999) were supported, postulating a positive relationship between corporate entrepreneurial intensity and environmental scanning intensity, planning flexibility, broad locus of planning, and high strategic controls. In other words, this outcome suggests that entrepreneurial intensity is affected by the nature of the firm's strategic management practices. Likewise, the attainment of the much-needed recovery requisites under turbulent environments, conditioning the organizational embarkation on a recovery mode, in general, and determining the nature of the contingent corporate recovery path, in specific, are also a function of the entrepreneurial-leadership behavioural patterns practised over time (Kouzes and Posner, 1993).

As such, instead of having environmental forces shaping, and, at times, hindering, corporate recovery, the firm itself could shape the nature and speed of its own recovery, and its recovery pathway, with the nature and extent of its own strategic management practices. For example, given Barringer and Bluedorn's (1999) research outcome discussed above, firms with high entrepreneurial intensity levels (that is, undertaking high scanning intensity, planning flexibility, broad planning locus, with a strong emphasis on strategic controls), are more likely to experience an *evolutionary* type corporate recovery path (Path IV: 1, 4), characterised by its shortness, relatively low cost and high-speed of recovery. It is

conceivably the most cost effective recovery path, where recovery strategies are implemented in only two recovery states, namely, Phase I: “Jumbled” State and Phase IV: “Routinization and Stability”. Following this path, the recovery process is rather direct, that is, it commences in Phase I and ends in Phase IV (Figure 1).

In contrast, the more conservative the firm is, in terms of practising a low level of entrepreneurial intensity (low in scanning intensity, planning inflexibility, narrow planning locus, with minimal or no emphasis on strategic controls), the more likely it is to experience one of the three *incremental* type corporate recovery paths (Path I: 1, 2, 3, 4; Path II: 1, 2, 4; or Path III: 1, 3, 4) (Figure 1), all of which are characterized by their hefty costs, length (prolonged recovery process), and, thus, recovery delays. Path I (1, 2, 3, 4), is conceivably the longest incremental path, where recovery strategies are implemented in all four recovery stages, namely, “Jumbled” State, “Experimental” State, “Transitional” State and Routinization & Stability”.

CONCLUSION: SIGNIFICANCE, CONTRIBUTIONS AND DIRECTIONS FOR FUTURE RESEARCH

This section presents the significance, contributions and implications of the current research study to management theory and practice. With the application of the firm-level entrepreneurial intensity research (Barringer and Bluedorn, 1999) to the contingent recovery pathways (Helou, 1995; 2017), the firm would be in a better situation to determine the emergent recovery path it is likely to experience, given

the nature of its strategic management practices. As such, given high turbulence and decline, the firm would be in better command of planning its recovery strategies, given the available knowledge of the relationships between the nature of five pertinent strategic management practices and the level of intensity of its entrepreneurship, which, in turn, impacts the nature of its recovery and development. Knowledge of the relationship between the level of corporate entrepreneurial intensity and the nature of the firm's recovery pathway, is significant to both researchers and managers, as it assists in developing a better understanding of the intricacies of the firm's recovery pathways and corporate entrepreneurship interface.

This study represents the basis for future empirical research in the area of firms' recovery given decline and firm-level of entrepreneurship intensity. In addition, future research will further seek to validate the findings of the current research through applications to real case studies relating to both public and private-sector firms operating in both manufacturing and service industries. Furthermore, future research would incorporate exploring further organizational dimensions, including additional strategic management practices, that positively impact the corporate entrepreneurial intensity needed for the realization of a shorter, and possibly more cost-effective *evolutionary* recovery path, as opposed to the costly and time consuming *incremental* recovery pathways.



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From Jugaad To Startup For A Sustainable Livelihood - A Case On Bio-Sand Filter

Sode Raghavendra
Asst. Prof. HR & SS
raghavendra.s@ibsindia.org

Mrs. Kalaa Chenji
Asst. Prof. HR & SS
chenjikala@gmail.com

ICFAI Business School, The ICFAI Foundation of higher education
(Declared as Deemed to be university)
Dontanapally Campus, Shankar Pally Road, Hyderabad
Telangana – 501203 India

Abstract

Jugaad represents an innovative way to fix a problem or simple work-around used for solution that bend rules or resources that can be used as such or a person who can solve a complicated issue. Startup is an entrepreneurial venture which is typically newly emerged, fast-growing business that aims to meet a marketplace need by developing or offering an innovative product, process or service and Sustainable livelihood is 'A livelihood comprises the capabilities, assets (including both material and social resources), and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base.' The case is a startup which uses jugaad to provide sustainable livelihood to solve the problem of water

in rural India. The case on Bio-sand filter attempts to explore how simple process of filtering water can quench the thirst of rural India. A startup founded by Michael Lipman and Cathy Forsberg provided sustainable livelihood to the poor.

The case focuses to explore the challenges and opportunities by means of jugaad, converted into entrepreneurial start-up while accomplishing sustainable livelihood.

CONCEPT

1. JUGAAD

Jugaad is an Indian way of innovation. It is used to denote an innovative way to solve a complicated issue or problem with simple solutions by bending the rules of thumb. The mantra is to come up with a significant creative idea to make the things work or to solve problems with scarce resources. Jugaad is being accepted as a frugal engineering technique and is promoted by institutes of repute like IITs and companies alike to reduce R & D costs. Jugaad is any type of creative or out of box thinking. It is generally used as a word to represent an innovative fix or a simple work-around, used for solutions that bend rules, or a resource that can be used as such, or a person who can solve a complicated issue. The meaning is often used to signify creativity to make existing things work or to create new things with meagre resources. Jugaad is increasingly accepted as a management technique and is recognized all over the world as an acceptable form of frugal engineering at peak in India. Companies in India are adopting Jugaad as a practice to reduce research and development costs. Jugaad also applies to any kind of creative and out of the box thinking or life hacking, which maximizes resources for a company and its stakeholders.

2. STARTUP

A startup is an entrepreneurial venture in new emerged, fast-growing business which enters in market with new products, process or services to the customers. Mostly they are small business which eventually expand and grow into full fledged company over some years. . A startup is usually a company such as a small business, a partnership or an organisation designed to rapidly develop scalable business model. Often startup companies deploy technologies, such as Internet, e-commerce, computers, telecommunications or robotics. These companies are generally involved in the design and implementation of the innovative processes of the development, validation and research for target markets. While startups do not operate in technology realms, the term become internationally widespread during the dot-com bubble in the late 1990s, when a great number of Internet based companies were founded.

3.SUSTAINABLE LIVELIHOOD

Chambers and Conway (1992) and the Institute of Developmental Studies¹ team defines sustainable livelihood as ‘a livelihood is sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base’, livelihood comprises the capabilities, assets (including both material and social resources) and activities

required for a means of living. The livelihoods model states stresses on four different types of sustainability viz., Environmental sustainability (life supporting natural resources is enhanced for next generations; Economic sustainability (enabling poor's economic welfare is sustained; Social sustainability (minimizing social exclusion) ; and Institutional sustainability (creating structures and process to have the capacity to perform their functions sustainably). Leo de Haan (2012) focuses livelihood approach as an agency of the poor, the way people organize their lives, concentrating more on opportunities than on their conditions of impoverishment.

Sustainable livelihood framework is based on assessing various types of vulnerabilities, assets, strategies & outcomes, policies and institutions. The vulnerabilities include shocks, seasonality and critical trends. Different types of Assets described in the model are : Human Capital (enhancing skills, education to adapt to changing situations); Natural Capital (includes land, forest, wildlife, biodiversity and water conservation); Physical Capital (consists of developing infrastructure, tools & technologies); Financial Capital (includes savings, credits, pensions, wages etc.) Strategies adopted to achieve sustainable livelihood could be natural resources based activity or non-natural resource and outcomes could be increased income, improved food security, reduced vulnerability resulting in sustainability. The outcomes of sustainable livelihood are not only based on assets, vulnerability but also on structures that exists in private and public sector which involve in services.

Sustainable livelihood is a holistic approach to solve the problem of poverty, natural resources like water. The approach in the case focuses on investigating level of vulnerability, assets (Water - Natural capital); sustainable strategy adopted by institutional structure (SAPWII) to achieve the objective of sustainability.

Water is inevitable natural resource for human survival and for development. But due to the increased industrialization, urbanization etc. has led to discriminate exploitation of water resulted in scarcity and host of other problems like water pollution, depletion of underground water, change in hydrological cycle etc. Conservation of water has been an integral aspect as per the constitutional and legislative provisions of India. The Environmental protection Act (1986)², National Conservation Strategy³ and Policy Statement for Abatement and Pollution (1992)⁴, National Environment Policy (2006)⁵, etc. are some the key frame works to oversee the sustainable and equitable availability of water and other natural resources. And Sustainable Livelihood could be the way forward to ensure that water is sustained. The case explores jugaad innovation of water purifier and turning it into a startup to achieve sustainable livelihood.

The sustainable livelihood idea was introduced by the Brundtland Commission⁶ on environment and development as a way of linking socioeconomic and ecological considerations in a cohesive, policy-relevant structure. The 1992 United Nations Conference on Environment and Development⁷ (UNCED) expanded the concept, especially in the context of Agenda 21, and advocated for the achievement of sustainable livelihoods as a broad goal for poverty eradication. It stated that

sustainable livelihoods could serve as an integrating factor that allows policies to address “development, sustainable resource management, and poverty eradication simultaneously”.

UNDP⁸ defines sustainable livelihood as “A livelihood comprises the capabilities, assets (including both material and social resources), and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base.”

INTRODUCTION

As the axiom goes “Jal hai to kal hai” water is indispensable for the human race to survive and flourish. Water scarcity is one the most serious concerns haunting the world today. Globally, millions of people do not have access to water or unable to use the water available. According to WWF, 1.1 billion people worldwide do not have access to water and a total of 2.7 billion find water scarce for at least one month of the year.

Scarcity of water on one hand and on the most important side the lack of safe drinking water is raising serious concerns all over the world. According to Food and Agriculture Organisation⁹ of the United Nations, 783 million people do not access to clean and safe water world-wide. More than 8,40,000 die each year from water related diseases. It is also revealed that every minute a child dies of a water-related disease.

In India, growing population, expanding agriculture and industrial sectors have surged the demand for water. In the early 2000s a number of demand-driven approaches have been introduced in rural India to improve safe drinking water supply. In 2010, the UN¹⁰ estimated that, access to improved water supply exists if at least 40 liters of safe drinking water are provided within a distance of 1.6 km or 100 meter of elevation difference. There should be at least one pump per 250 persons. A 2007 study by the Asian Development Bank¹¹ showed that in 20 cities the average duration of supply was only 4.3 hours per day.

Indira Khurana and Romin Sen (2015) opined that India is characterized by non-uniformity in level of awareness, social-economic development, education, poverty, practices and rituals which add to the complexity of providing water. The health burden of poor water quality is enormous. It is estimated that 37.7 millions of Indians are affected by waterborne diseases annually. 1.5 million children are estimated to die of diarrhoea alone and 73 million working days are lost due to water borne disease each year. The resulting economic burden is estimated at \$600 millions a year. The problem of contamination is also prevalent in India with 1,95,813 habitations in the country are affected by poor water quality. The major chemical parameters of concern are fluoride and arsenic.

In India, the financial and technical support for rural and urban water supplies is undertaken by the government. Institutional framework for water quality monitoring and data processing is inadequate in rural areas. The WHO¹² estimates

that around 3.5 million people die every year due to contamination of water. In India alone, around 2000 people die every day due to lack of clean drinking water.

BACKGROUND

According to Unitus Seed Fund¹³(2014) projected that only 18% of a total rural population have access to treated water. Only about one-third of rural households in India are reached by piped water supplies. The balance two-third of rural households is still living “beyond the pipe”. More than half of the pipes in rural areas in India deliver untreated water. The fund opined that a key challenge in securing government funding for water projects is that the tendering of process favors the lowest bidder as opposed to provider-quality or solution-durability. The absence of economically viable models operating at scale limits the ability of community water sector to attract commercial funding. Among the venture capital firms, 5 out of 15 provided funding to firms operating in the drinking water sector. Under these alarming circumstances, rural India requires an unconventional solution to solve the clean drinking water problem. As a ray of hope, a Canadian Scientist Dr.David Marz came out with a jugaad and designed an incredible tool to solve the drinking water problem. He developed a low cost Bio-sand water filter that effectively purifies the water by removing all the dissolved particles and pathogens from the water. The slow purifying process manages to remove upto 98 percent of bacteria, 100 percent viruses, 99 percent of parasites, protozoa, amoebae and worms. 95 percent of heavy metals and with a slight modification, 93 percent

of arsenic it manages to eliminate illness such as Typhoid, Cholera, Hepatitis A, Rotavirus, E-coil bacteria and other dysentery causing organisms.

The bio sand filter has been successfully tested and accepted by several governments and health care institutions and research departments all over the world. The filter has been introduced in 66 countries. It costs about Rs.3000 and works for 30 years. No maintenance costs incurred and no electricity required, filters 84 litres of water daily, sufficient for 10-12 people, or 70 schoolchildren.

A boon to rural India, a prospect to change the destiny of thousands of lives, Michael Lipman and Cathy Forsberg from US founded South Asia Pure Water Initiative Inc. (SAPWII) in Karnataka in association with Peace corp¹⁴ and Rotary club¹⁵. The US couple received a start-up grant from a foundation in Connecticut in 2005.

SAPWII appointed India country representative Shivani Kumar (Kumar) to study the issues in rural India. She was shocked to observe the pathetic conditions that existed. She saw a pond where children were bathing and then drinking the same dirty water. During her visit she noticed people defecating in rivers and lakes, and then using the same water source for drinking and cooking. Commenting about the plight of drinking water facilities in rural India, she said *“This might be a common occurrence in villages, but it was painful for me to see and I knew I had to do something about it,”* Kumar says. Having spent all her life in the U.S., Kumar was unable to accept the fact that clean drinking water was unavailable to thousands. She states, *“After air, we need water. Water is Life.”*

Bio-sand filter is a Jugaad successfully transformed into startup which meets the needs of the rural India while maintaining sustainability. Slowly, SAPWII started making an impact on the drinking water habits of ignorant villagers. Of late, SAPWII has distributed around 12,000 filters, positively impacting 1,50,000 villagers. In order to spread the awareness about the hazards of contaminated water and need for availability of clean drinking water, SAPWII runs 5-day professional training programmes for NGOs¹⁶ and succeeded in developing a network across the country consisting of 90 NGOs in 22 states. Through the network, 25,000 filters have been distributed. Kumar said *“The way to spread this technology quicker and faster is through India’s NGOs. We still have a long way to go,”*

FUNCTIONING

A perfect paradigm of Jugaad the Bio-sand filter uses simple technology to reduce the hardships of the poor. It’s made of locally available cement, sand and pebbles. The first layer consists of sand and pebbles on which a 2-inch standing water known as the “bio-layer is maintained”. The dirty water is poured on top touching the bio-layer where bacterial predation occurs. The water moves through the filtration sand and because of an electrostatic charge, viruses adhere to the fine sand and are trapped within. This is known as adsorption. Further, as there is no food, no light and no oxygen, further pathogens are killed. The pebbles filter the water and collect it in an outlet tube. The clean water is stored in a container with a lid to protect it from re-contamination. In the words of Kumar “It’s really a case of

nature purifying nature. This simple eco-friendly solution is found within nature itself. I still get amazed!” Exhibit- I explains the infographic:

NGOs play an important role in spreading the awareness. They educate the villagers about the importance of clean drinking water and its availability at affordable price. The NGOs sell the filter to an individual user. Sometimes, villagers receive microfinance while others get subsidized filters from their local NGOs. NGOs struggle to instill the sense of ownership amongst villagers, they are encouraged to read the value of the product more than the price for which they receive it. “When villagers contribute even Rs.500 towards their filter, they are more likely to value it.” Kumar says.

THE CHALLENGE

The biggest challenge for a Startup like SAPWII is to reduce the resistance to change among people to adopt the bio-sand filters by creating awareness. The villagers are habituated to their present life style – even though they fall ill frequently they are not ready to adopt bio-filters. Kumar explains “There are many barriers to change. The villagers do not accept something new. But we are trying to change that through more awareness campaigns and with the help of media.” SAPWII also conducts sanitation and hygiene education since it is closely related to clean drinking water. Even though SAPWII conducts workshops, campaigning to educate people about advantages of bio-sand filter but funding this project is also a major concern. Rural people cannot afford to pay such a huge amount for

which SAPWII came out with installment scheme to promote these filters. Reach is another issue along with operational concerns like weight of the filters, transportation to remote villages etc .

The challenge faced by the Bio-sand filters is heavy weight. The filters are made of cement concrete, sand, pebbles and other material which makes it heavy and it becomes difficult to transport to remote villages on rural roads. The concrete body filter may suffer cracks or breakages due to salts present in water. During the transportation of the heavy filter on bumpy rail roads the edges of the filter may chip off. Alternatives like stainless steel, plastic versions are also available with their own limitations.

ROAD AHEAD

No one person or NGO can bring a change alone. We need to work collectively for the clean water cause, while keeping in mind the revival and sustenance of livelihoods of rural people;” says Kumar. SAPWII has invited professional trainers from Friendly Water for the World (FWFW) to train the NGOs of India. In order to sustain the model they are looking for fundraising. The demand for Bio-sand filters is rising enormously and SAPWII has shown a 300 percent growth in 2014. More participation from the society and more monetary contribution could help them in leaving a better impact.

According to Kumar, “Whenever you see a need, just jump in and do it. Water is a basic necessity and everyone has the right to access clean drinking water. You can



help the initiative by being a part of their training programmes, donating filters to a village through their Adopt-a-village program, or just spreading awareness about the amazing technology that can change the lives of thousands of people in the country.

“The heart and soul of India lies in its villages. Come join our cause to whatever cause touches your heart. Let’s help people exercise this right.” Says Kumar.

DISCUSSION

“Startup India” a initiative announced by the Prime Minister of India Sri Narendra Modi is a revolution to foster development through innovation. The objective of Startups is to transform Indians from job seekers to job creators. Economic times reports India is just after the US and UK and will be second in the world soon. Indian technology start-ups landscape has seen a “tremendous growth in the emergence of innovative startups and creative entrepreneurs.

Economic Times studies that 2016 has not been an easy year for startups in the country. With investors looking for a roadmap towards profitability, startups have found that raising funds is not going to be easy. Profigacy is scorned upon and startups have realized it is time to perform or perish.

In a prelude to the Startup India Summit 2016, President Pranab Mukherjee graciously admitted, “We are late”. Is the delay limited to not encouraging startups? Or not easing up policies for doing business? Or being late in providing impetus to Indian manufacturing? Or are we late in addressing much larger graver challenge? Like being a little too late in creating an ecosystem for innovation and entrepreneurship?

Amit Balooni in 2015 expresses while the course of action changes being initiated now would start apt in the big jigsaw puzzle, the larger challenge is to bring a deeper socio-economic change – an era of democratized, bottoms-up innovation, A jugaad revolution. Jugaad is a initial point of an improvement-driven culture. Jugaad revolution requires much more deliberate approach to be impactful. It can

uplift and empower in a true sense. Once the frameworks of Startup India, sustainable livelihood move in tandem, as part of the larger ecosystem and executed to the last mile, we can truly unleash a creative, innovative India.

To be at par with the present dynamic business arena, India requires jugaad converted startups for achieving sustainable livelihood. Bio-sand filter is a live illustration of grassroots innovation can go a long way to engine economic development, the need of the hour, sixty eight years has been a long wait.

ENDNOTES

1. Institute of Developmental Studies¹-
The Institute of Development Studies is an [international development](#) research institute. IDS acts to influence policy makers through research by working with international policy makers.
2. Environmental Protection Act (1986)² –
The act provides for the protection and improvement of environment and for matters connected there with.
3. National Conservation Strategy³ - The
National Conservation Strategy is for laying down the guidelines that will help to weave environmental considerations into the fabric of our national life and of our development process.
4. Policy Statement for Abatement and
Pollution (1992)⁴ – The document is to integrate environmental considerations into decision-making at all levels.
5. National Environment Policy (2006)⁵ –
National Environment policy 2006 is a response to India's national commitment to a clean environment, mandated in the constitution strengthened by judicial interpretation.

6. Brundtland Commission⁶ – A report from the United Nations world commission on environment and development was published in 1987.

7. United Nations Conference on Environment and Development⁷ – also known as the Rio de Janeiro earth summit, was a major UN conference held in Rio from 3 to 14 June, 1992.

8. UNDP⁸ – The United Nations Development Programme (UNDP) is the United Nations global development network. Headquartered in New York city.

9. Food and Agriculture Organisation⁹ – The FAO is a specialized agency of the United Nations with the mandate to combat hunger and ensure food security.

10. UN¹⁰ – The United Nations is an intergovernmental organisation to promote international co-operation

11. Asian Development Bank¹¹ – The Asian Development Bank is an Asia regional development organisation dedicated to reducing poverty in Asia and the Pacific through loans, grants etc.

12. WHO¹² – WHO's primary role is to direct international health within the United Nations's and to lead partners in global health responses.

13. Unitus Seed Fund¹³ – Unitus Seed Fund is a leading impact venture fund investing in startups innovation.

14. Peace corp¹⁴ – The Peace Corps serves in more than 60 countries on many of the world's pressing issues. Volunteers range in age, gender, race and professional experience.

15. Rotary club¹⁵ – The Rotary club is an international service organisation whose stated human rights purpose is to bring together business and professional leaders in order to provide humanitarian services.

16. NGOs¹⁶ – A nongovernmental organisation (NGO) is a not-for-profit organisation that is independent from states and international governmental organisations.

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